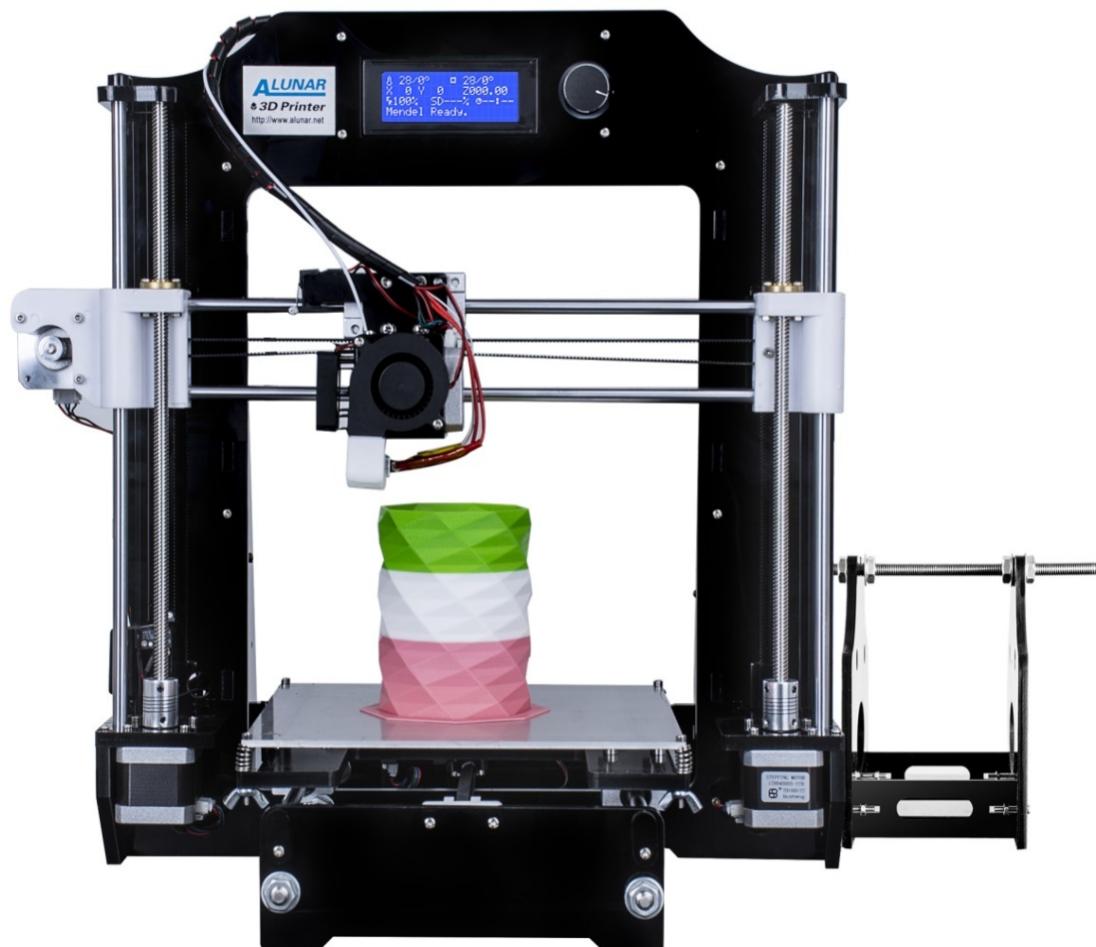


ALUNAR 3D Printer M508 Quick Start Guide



Service Skype:[alunar3d@hotmail.com](skype:alunar3d@hotmail.com)

Service Email:service@alunar.net

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Foreword

Thanks in advance for choosing our M508 3D Printer! With the Quick Start Guide (hereinafter as "Guide"), you could enjoy accomplishing the assembly, Test and Printing step by step. Meanwhile, you will also learn the structure principle and its special FDM printing technology deeply, and then you will get great progress on not only the theoretical knowledge but also the manipulative ability.

To give play to the bigger effect of the printer and ensure the worry-free buying, smooth and enjoyable using, we spare no effort to consider the problem and difficulty you will meet with from when you order the printer and make detail videos and pictures to show the exact settle way. We write this "Guide" elaborately in great detail and we will always accompany with your using 3D printer. The kits would come to you with high-class parts and need you to put them together. So please read the "Guide" carefully before you assembly and use the printer .Please use the printer in strict accordance with the "Guide" to avoid any defective or invalid use caused by improper operation. So please keep the "Guide" for your easy reference.

Special Tips:

With our objective of constant update for our printer, we would not make future notice to you if some specifications and models updated. And we apologize for the inconvenience would lead to you.

We will do our best to help and solve the problem with our products. Your positive review and feedback are so appreciated!

Wish you a nice day!

1. Machine parameters

Printing technology	FDM	Nozzle diameter	0.3(default),0.4,0.5mm
Print size	200*200*180mm	Printing precision	0.1-0.3mm
Filament	PLA /ABS /HIPS/WOOD	Printing speed	40-100mm/s (proposal)
Filament diameter	Φ 1.75mm	Working condition	10-40°C
Number of extruder	1	Humidity	20-50%

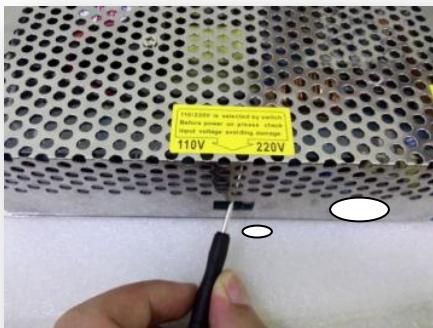
2. Flow Diagram for Quick Use Manual

Matters and Attentions ➤ Preparatory Work ➤ Preinstallation Checklist ➤ Assembly and Calibration ➤ Printing Test ➤ Senior Instruction ➤ Frequently Asked Questions and Settle Way

3. Important Notice and Attentions

3.1 Keep the assembling operation platform level.

3.2 Please ensure that you move to the right tap position for input voltage (110V or 220V) of the power supply (as shown in the picture).



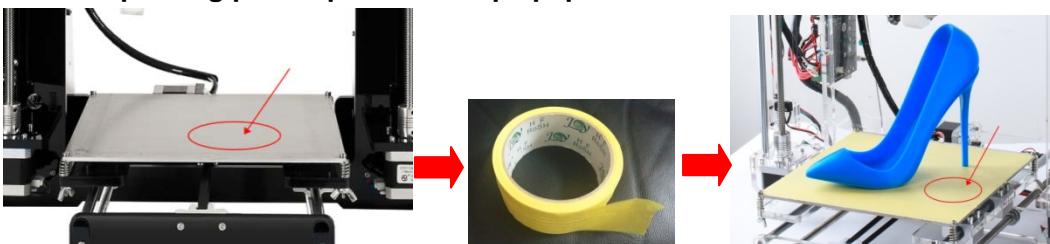
Warning: Must be in the condition of power equipment of the strike.

Input Voltage	100~160V	200~260V
Position choice	110V	220V

- 3.3 You need to make a proper degree of tightness of the pull belt for X axis& Y axis.
- 3.4 Ensure manual operation slide smoothly when you install the X, Y, Z axis.
- 3.5 When equipped the hotbed, you should keep the 4 angle level for sure.
- 3.6 Ensure the correct wiring for controller board and plug tightly into the exact socket.
- 3.7 Don't plug and unplug the wiring for controller board when power on, especially don't plug and unplug the connect wiring for power supply.
- 3.8 Don't touch the extruder and hotbed when printer is power on to avoid the scald.
- 3.9 Before installation please remove the protective paper.



- 3.10 Before printing please paste on crepe paper.



4. Preparatory Work

1. Tool and kit preparing: one level desk at more than 2 sq. m. size, one computer, one scissor, SD card reader, power supply and so on.
- 2. Open the box you got, and read the “Guide“ from the SD card. We suggest that you should copy all the documents to the computer from the SD card and then start assembling according to the “Guide” (SD-Card: \Installation Instruction\ALUNAR 3D Printer M508 Quick Start Guide)**

5. Preinstallation Checklist

5.1 Step Way of Opening Box

Please look over the whole box appearance and make sure whether the box is damaged (if damaged, please feel free to contact with our customer service); and then please open the box and check the kits list as per “opening the carton” (SD-Card: \Packing list\Open the carton.) And “Video of opening carton” (SD-Card: \Installation Instruction\Video\ Open Carton.MP4)

5.2 Take an account of kits

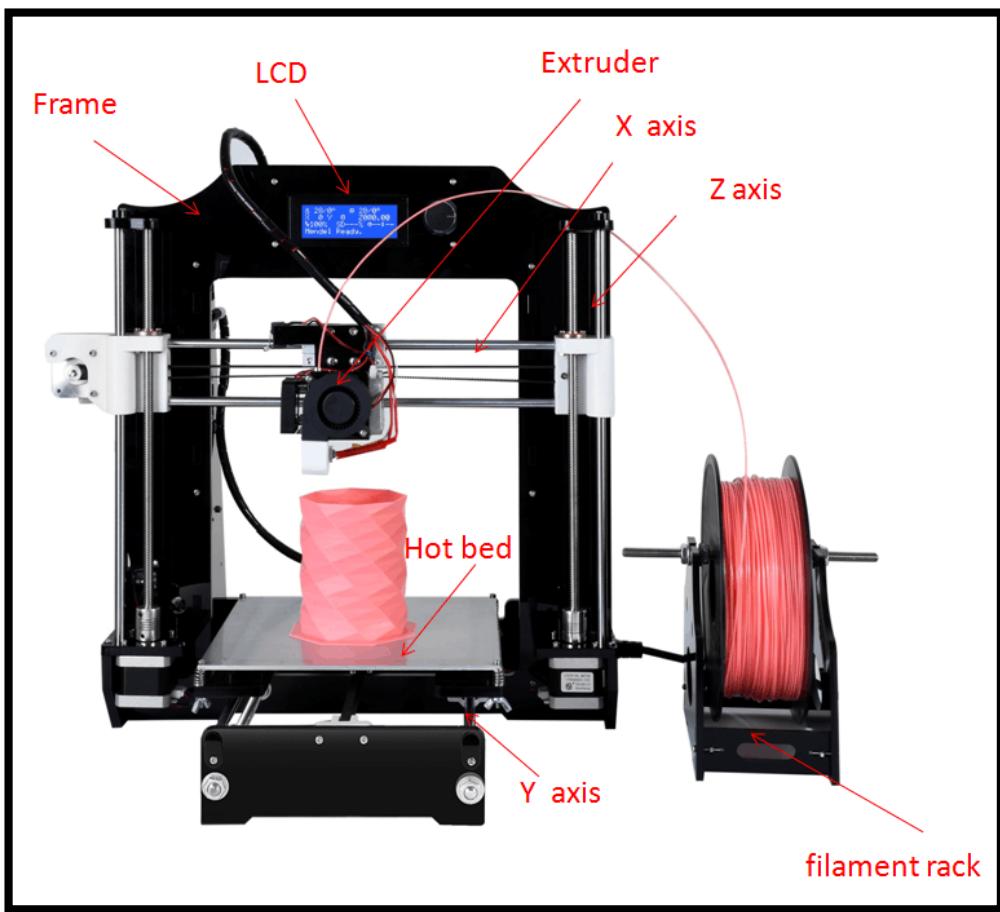
Please check out all the parts and make sure if any part is lost or damaged as per the “Packing List” (SD-Card: \Packing list) and video “Open carton” (SD-Card: \Installation Instruction\Video\Open Carton.mp4.)

Please feel free to contact our customer service once you find out that you lost or got any defective parts (except leading by the inartificial reason). We will try our best to settle your problems as soon as possible).

6. Assembly and Calibration for M508

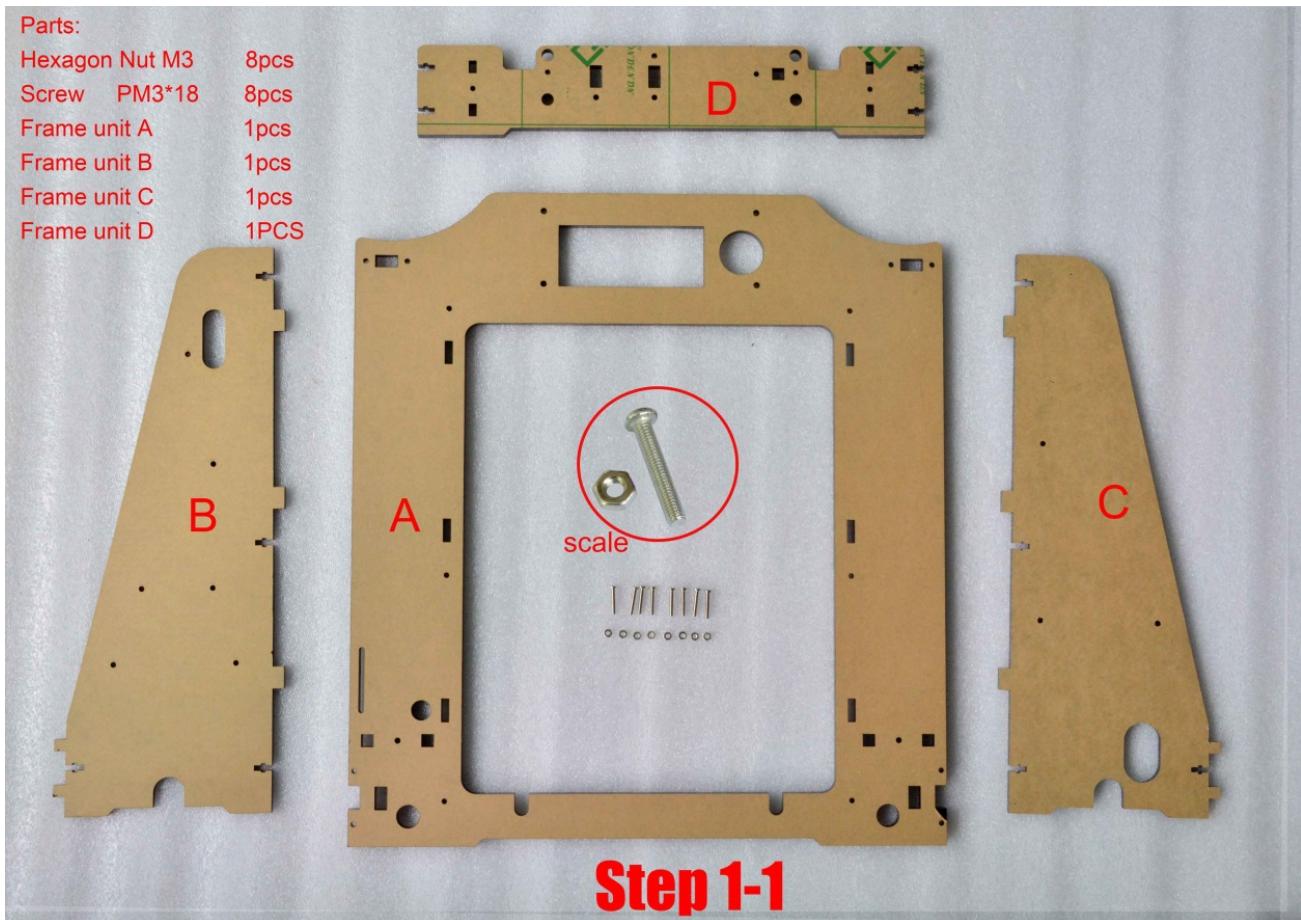
M508 assembly: Please assembly the printer by following the step1- step7 on assembly diagram and video, and pay attention the prompt for key of assembling.(SD-Card: \Installation Instruction\Video)

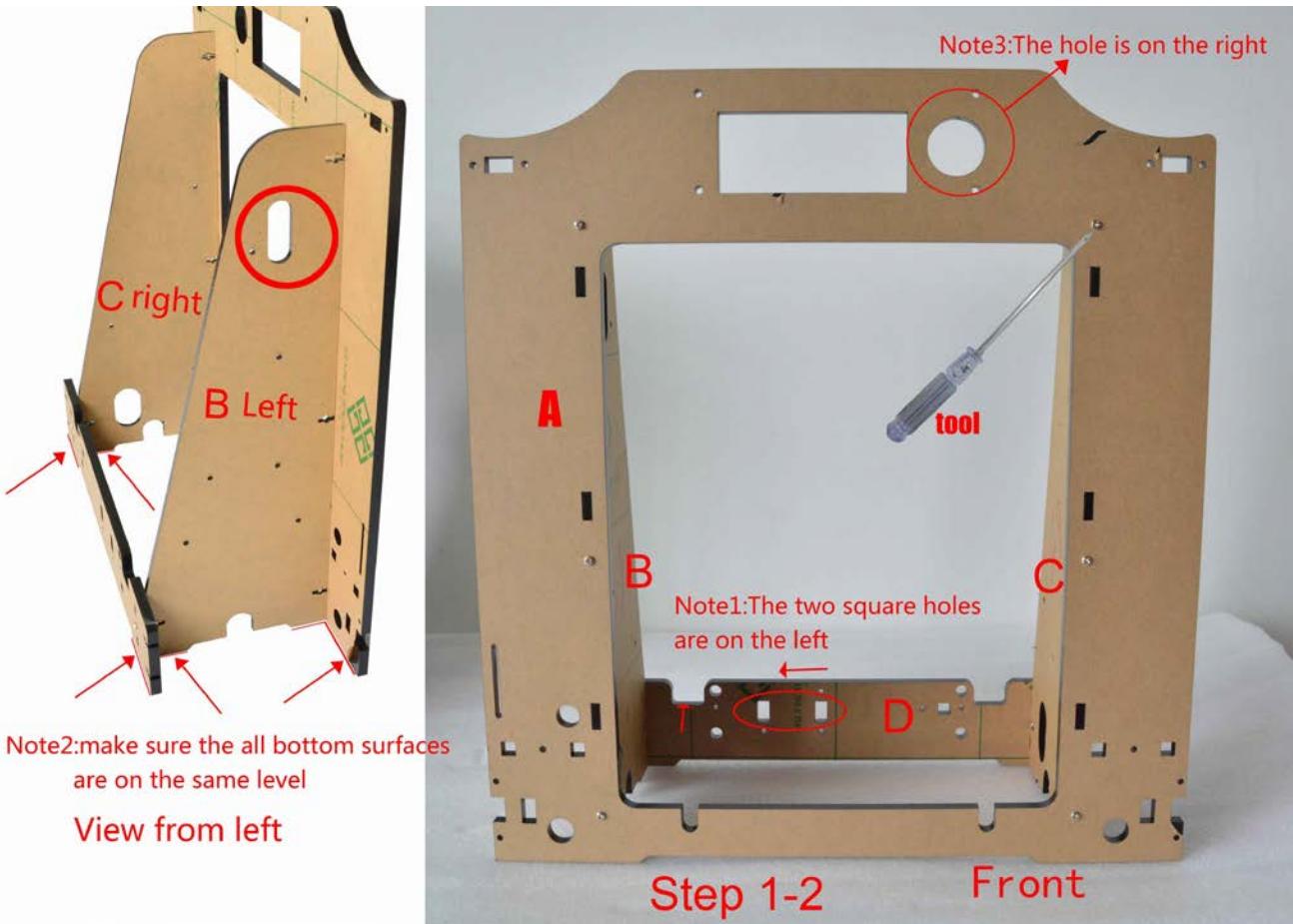
6.1 The main machine structure



6.2 Step1 Frame assembly

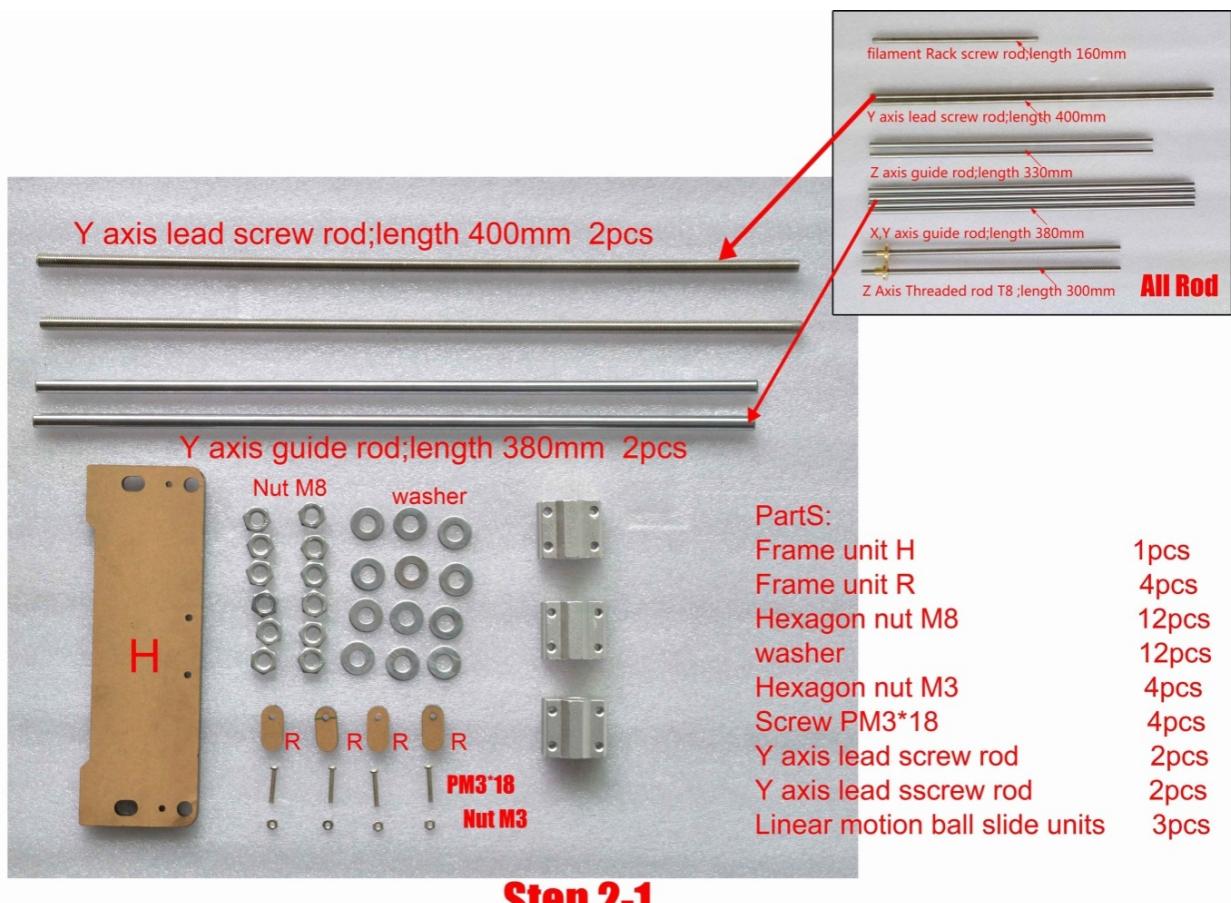
Video (SD-Card: \Installation Instruction\Video\1-Frame assembly.mp4)

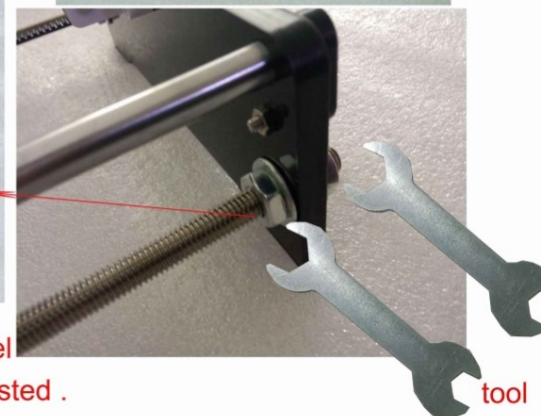
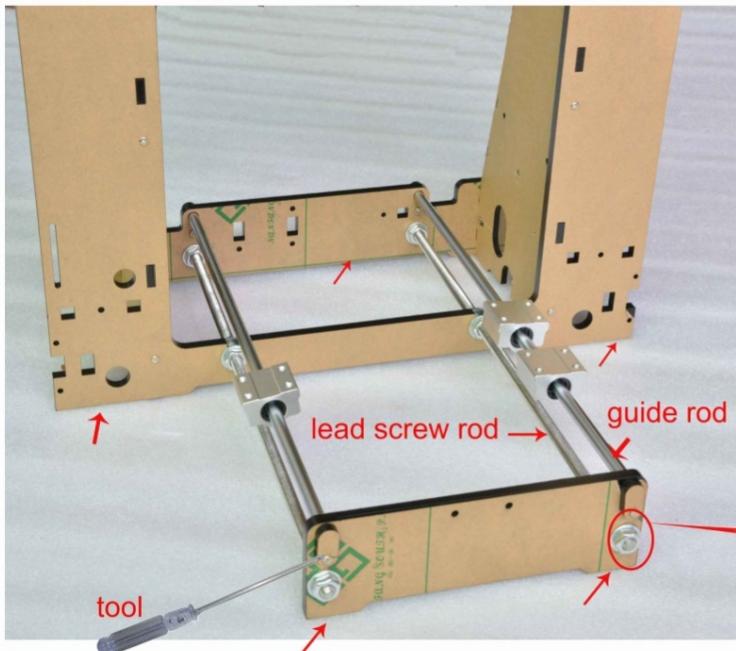




6.3 Step2 Y axis assembly and hotbed assembly

Video (SD-Card: \Installation Instruction\Video\2-Y-Axis and Hot bed Assembly.mp4)

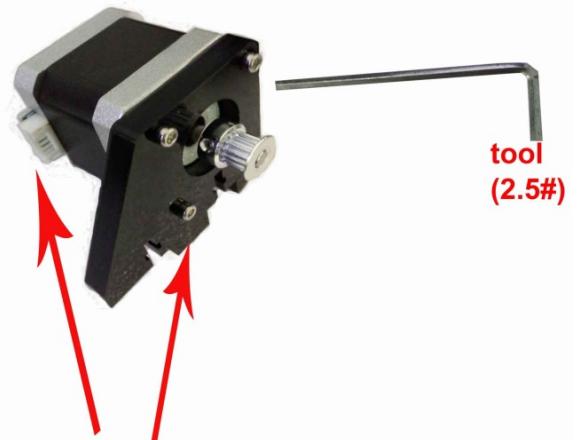
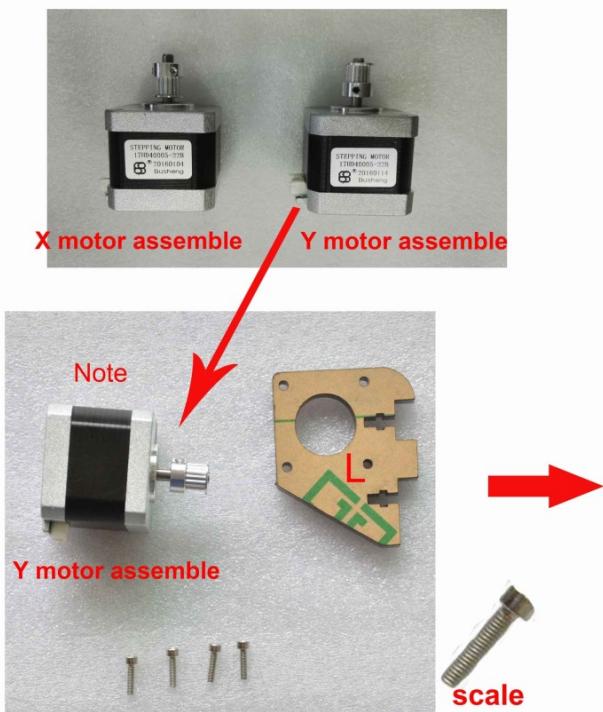




Note1:make sure the all bottom surfaces are on the same level!

Note2: Tighten the hexagon nut M8 after the frame is well adjusted .

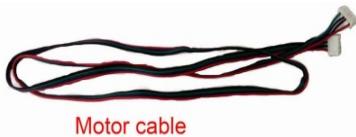
Step 2-2



PARTS :
Hexagon screw M3*12 4PCS
Frame unit L 2PCS
Y motor assemble 1PCS

Note:The motor socket is aligned with
the hypotenuse of Frame unit L

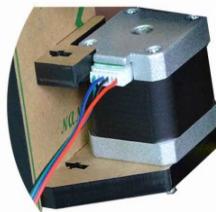
Step 2-3



Motor cable

Parts:

Y motor assemble 1 pcs

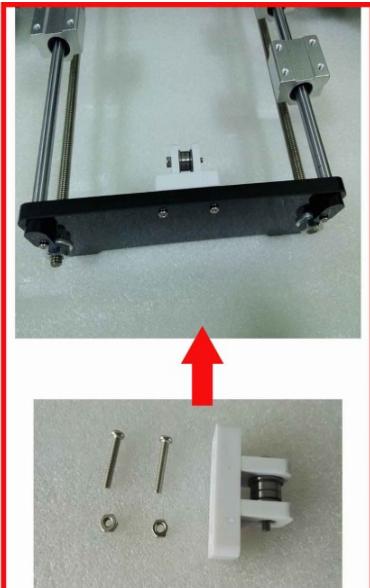
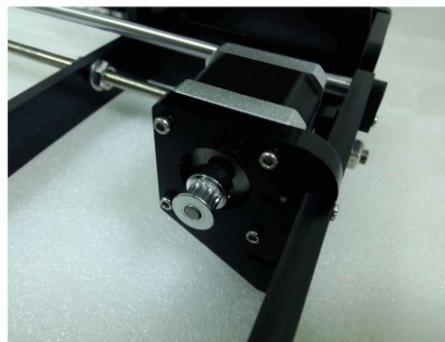


Screw PM3*18 2pcs

Y motor cables lenght:600mm

Hexagon nut M3 2pcs

Y motor cables 1pcs



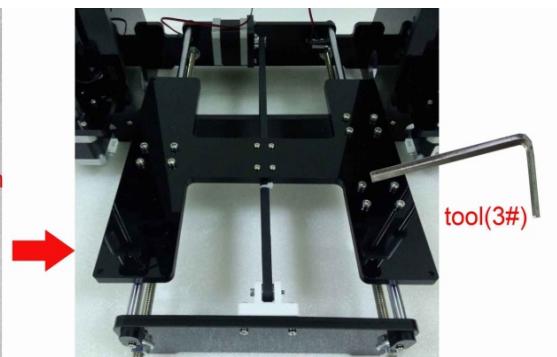
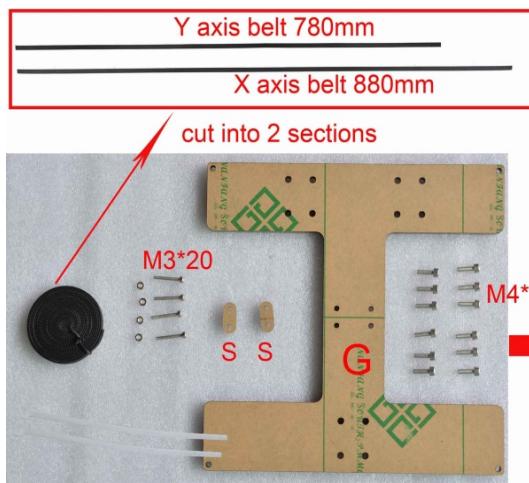
Parts:

Y holder assemble 1pcs

Screw PM3*18 2pcs

Hexagon nut M3 2pcs

Step 2-4



Note1:make sure the sliding back and forth smoothly after complete installation

Parts:

Frame unit G 1pcs

Frame unit S 2pcs

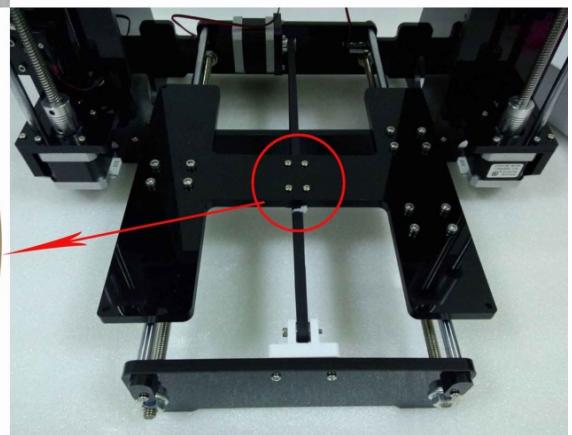
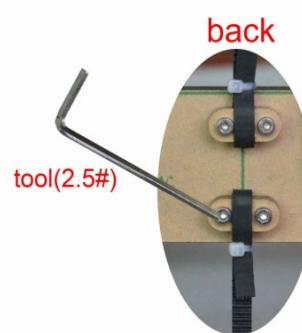
Hexagon screw M4*12 12pcs

Hexagon screw M3*20 4pcs

Hexagon nut M3 4pcs

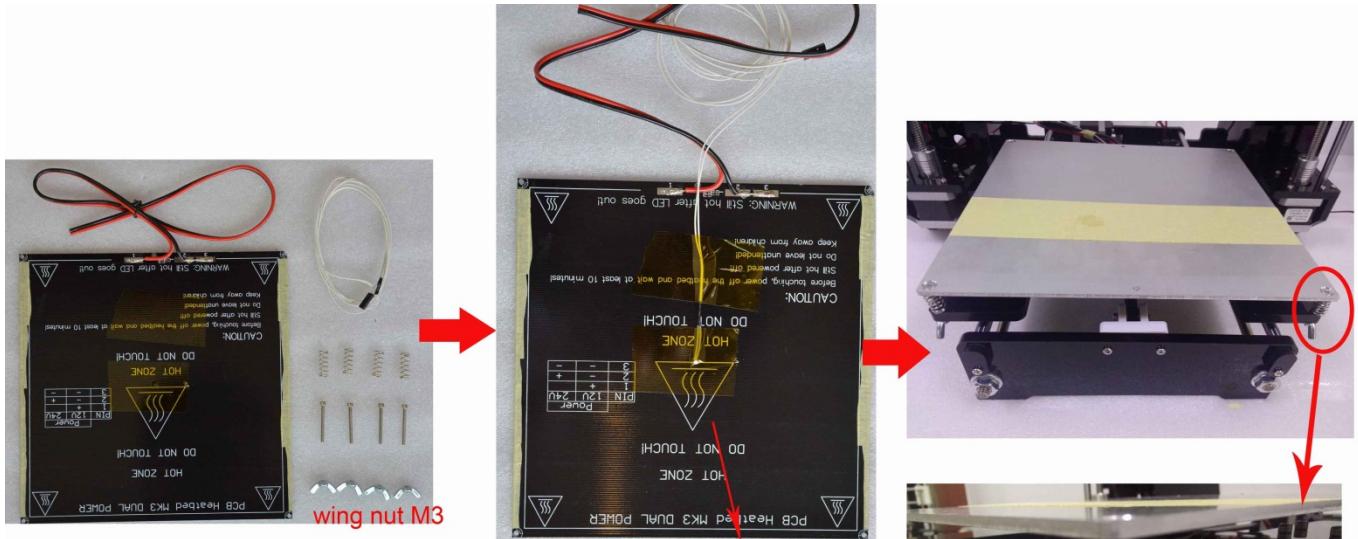
Belt 780mm 2pcs

tie-wrap 2pcs



Note2:After fixing the timing belt for Y axis , to check and make sure the belt tension is moderate,not too loose .Also make sure the sliding back and forth smoothly after complete installation

Step 2-5



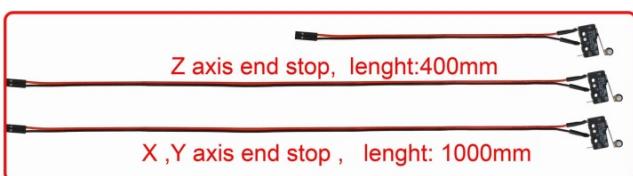
Parts:

Hot bed	1pcs
Thermistor	1pcs
Spring	4pcs
screw M3*30	4pcs
Wing nut M3	4pcs

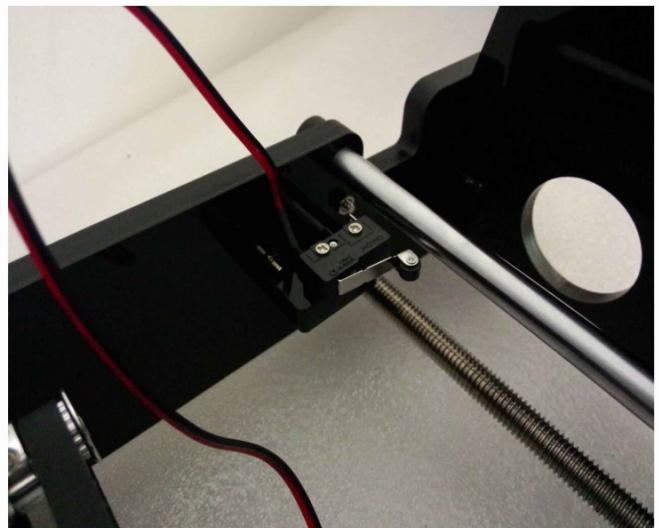
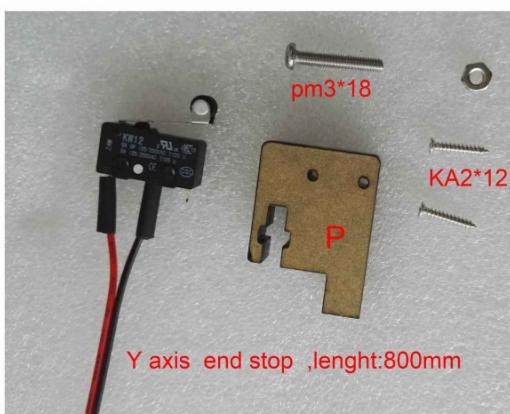
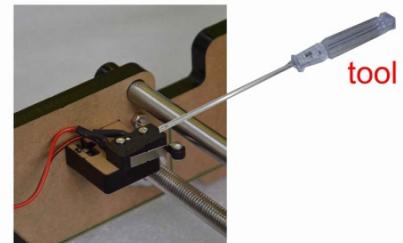


Note2: To get a leveling hot bed,
make sure 4 screws are same
about 5mm out coming from the nut

Step 2-6



All mechanical limited switch



Parts:

Y axis endstop	1pcs
Frame unit P	1pcs
Screw PM3*18	1pcs
Screw KA2*12	2pcs
Hexagon nut M3	1pcs

Step 2-7

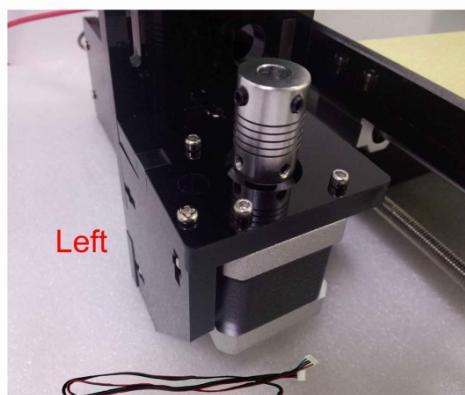
6.4 Step3 Z axis assembly and X axis assembly

Video (SD-Card: \Installation Instruction\Video\ 3-Z-X-Axis Assembly.mp4)



Note:the direction of the plug and Frame J

Parts:	
Frame Unit J	2pcs
Frame Unit K	2pcs
Hexagon screw M3*12	8pcs
Screw PM3*18	8pcs
Hexagon nut M3	8pcs
Motor cables	2pcs



Step 3-1

X motor assemble



Note:The motor socket is aligned with the bottom of left plastic seat

Parts:	
Left plastic seat	1pcs
Right plastic seat	1pcs
X motor assemble	1pcs
Hexagon screw M3*20	3pcs
Screw PM3*18	4pcs
Hexagon nut M3	4pcs
Threaded Screw nut	2pcs



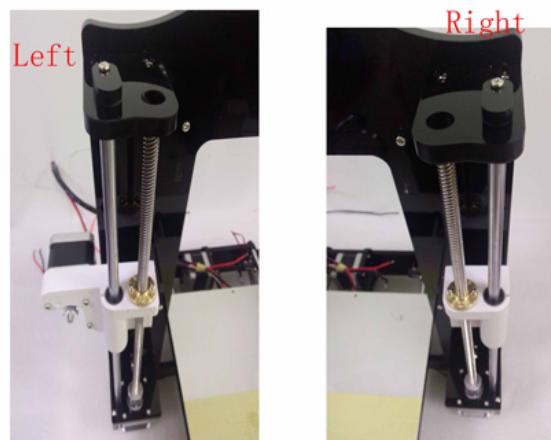
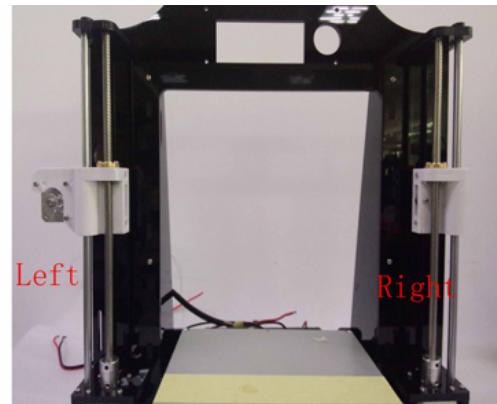
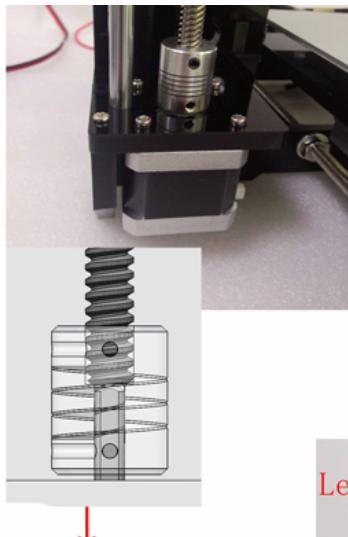
Step 3-2



Z Axis guide rod,length:330mm
Z Axis Threaded rod T8 lenght:300mm

Parts:

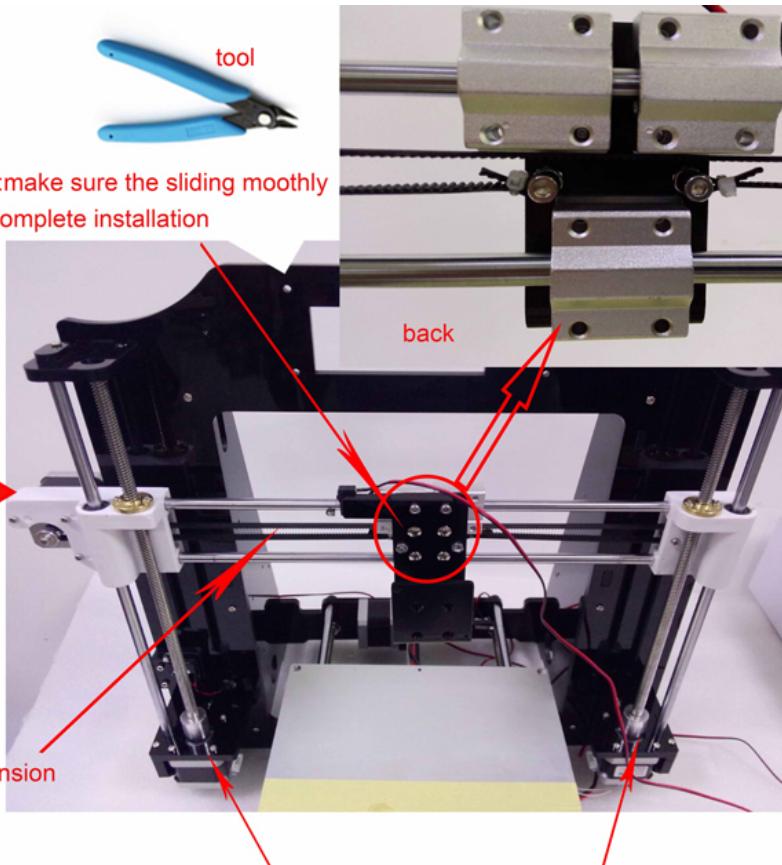
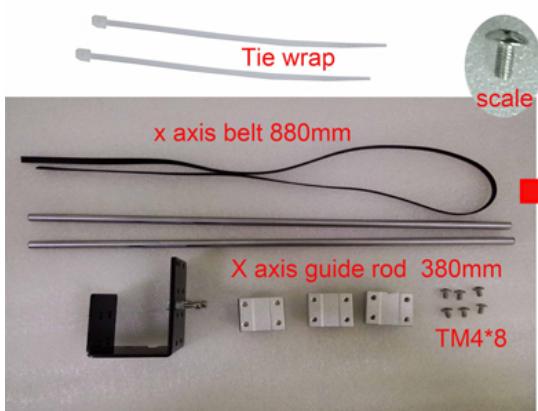
Left plastic seat assemble	1pcs
Right plastic seat assemble	1pcs
Frame unit M	2pcs
Frame unit R	2pcs
Screw PM3*18	6pcs
Hexagon nut M3	6pcs
X motor cable	1pcs



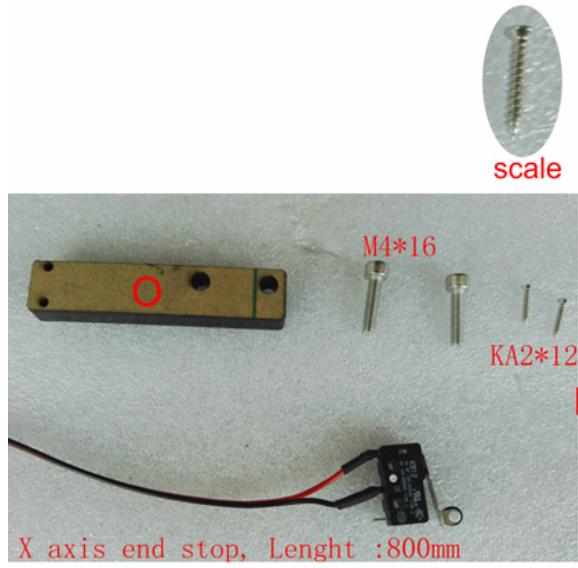
Step 3-3

Parts:

X axis Belt 880mm	1pcs
U bracket assemble	1pcs
X axis guide rod	2pcs
Screw TM4*8	6pcs
Linear motion ball slide units	3pcs
Tie-wrap	2pcs

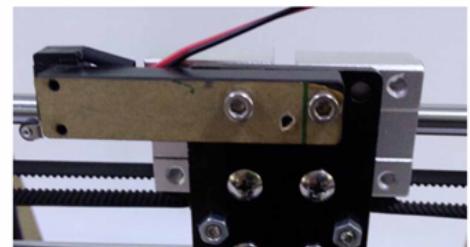
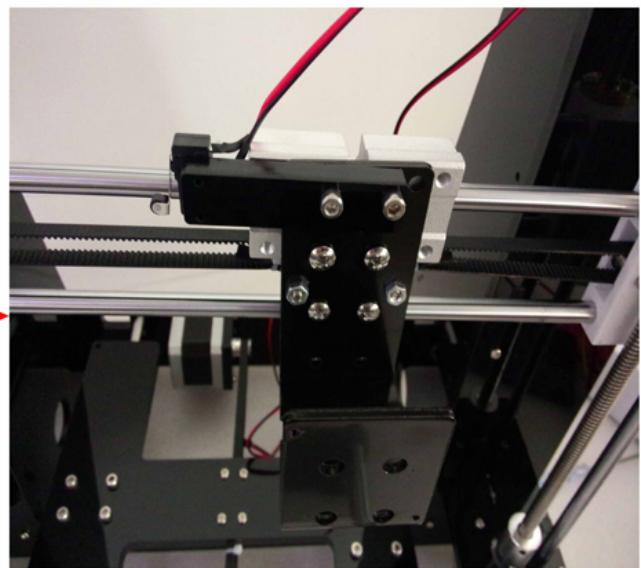


Step3-4

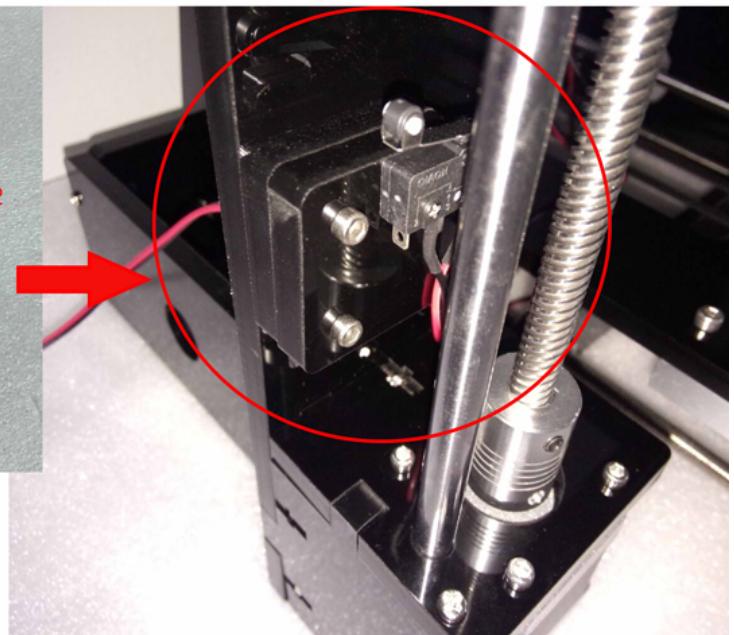
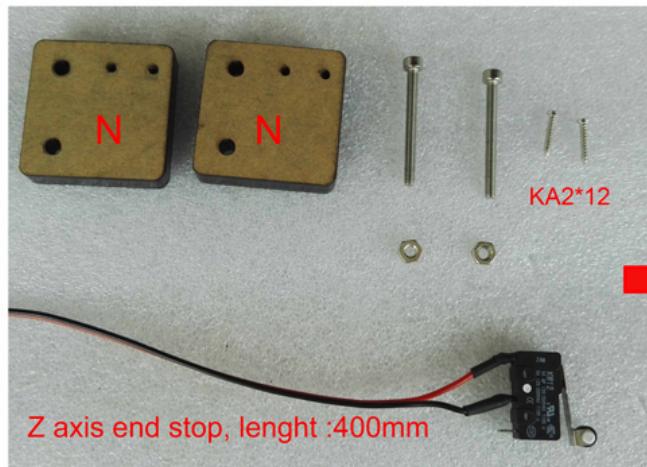


Parts:

Frame unit o	1pcs
Hexagon screw M4*16	2pcs
screw KA2*12	2pcs
X axis end stop	1pcs



Step 3-5



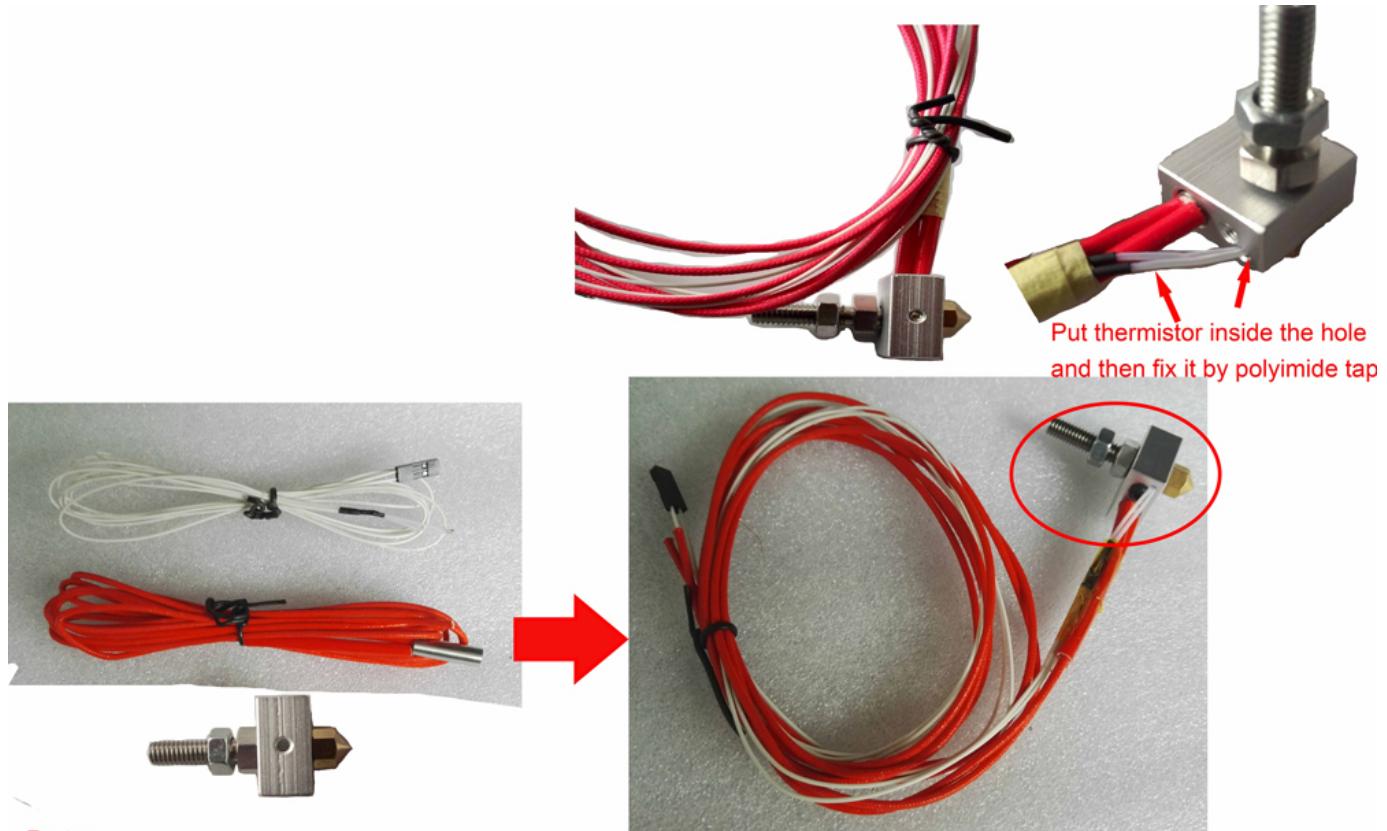
Parts:

Frame unit N	2pcs
Hexagon screw M3*30	2pcs
Screw KA2*12	2pcs
Hexagon nut M3	2pcs
Z axis end stop	1pcs

Step 3-6

6.5 Step4 Extruder assembly

Video (SD-Card: \Installation Instruction\Video\ 4-Extruder Assembly.mp4)



Parts:

NTC Thermistor	1pcs
Heater Cartridge	1pcs
Nozzle assemble	1pcs

Step 4-1

Note: These combination are well completed in upgraded version

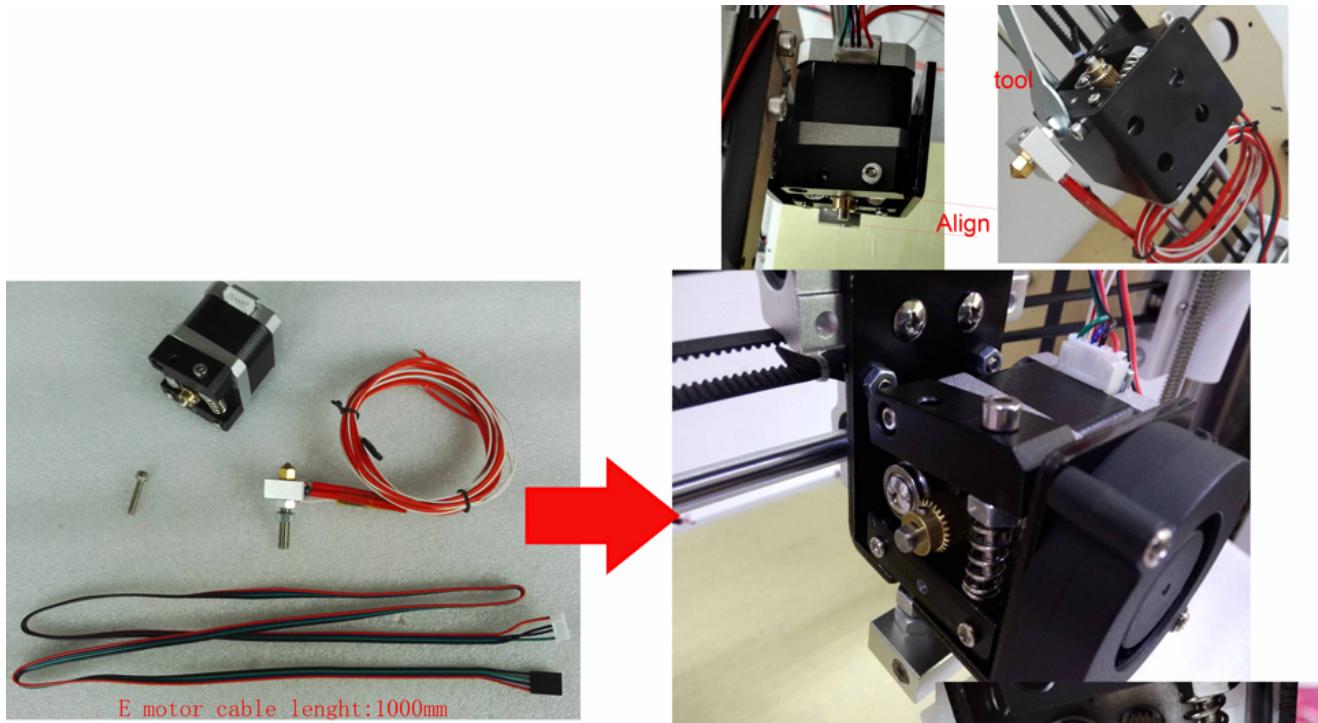


E motor assemble	1pcs
Spring	1pcs
Hexagon screw M4*30	1pcs
Hexagon nut M6	1pcs
Screw PM3*18	2pcs

Step 4-2



Note: These combination are well completed in upgraded version.

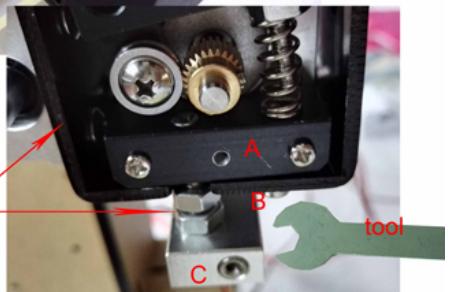


Parts:

E motor assemble	1pcs
Nozzle assemble	1pcs
Hexagon screw M4*30	1pcs
E motor cable	1pcs

Note: The surface of A, B and C must be kept aligned and M6 nut should be tightened with U braket

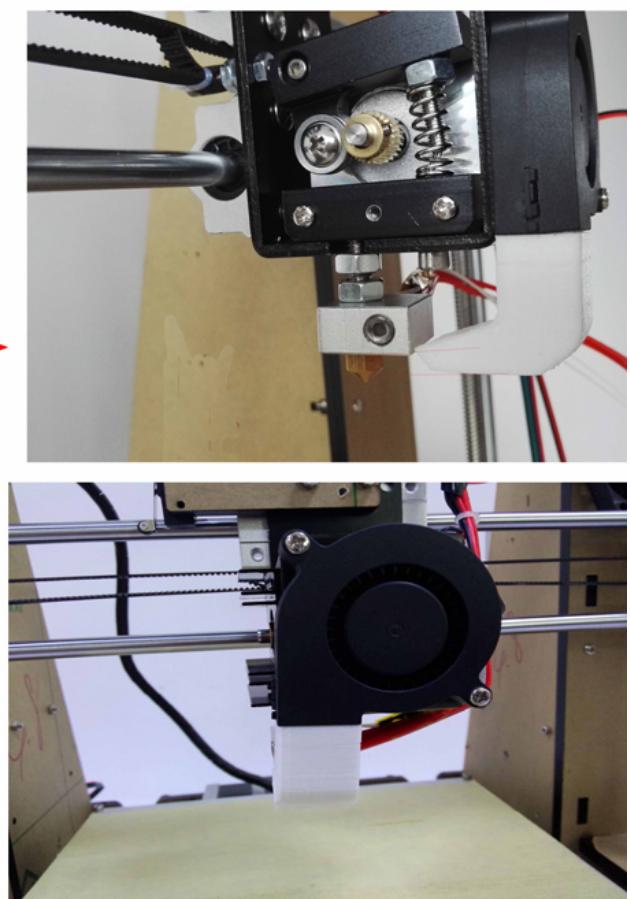
Step 4-3



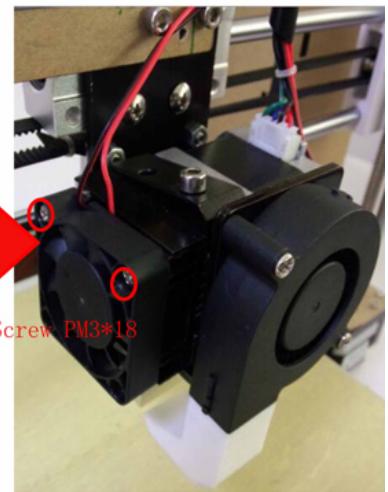
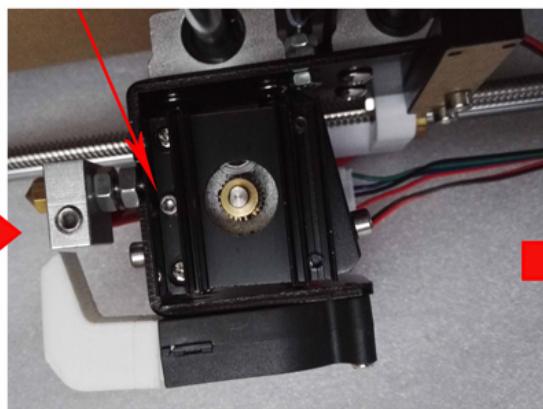
Parts:

Turbo fan	1pcs
Fan extender	1pcs
Screw PM3*18	2pcs

Step 4-4



Hexagon screw M3*8



Parts:

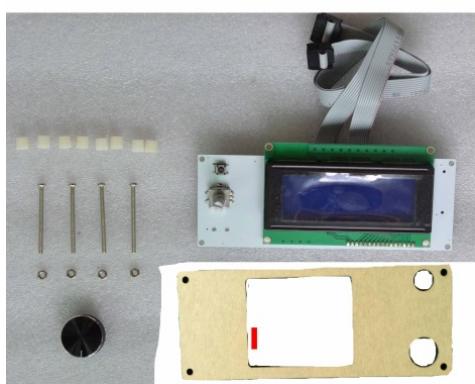
Cooling fan	1pcs
Heat sink	1pcs
Screw PM3*18	2pcs
Hexagon screw M3*8	1pcs

Note: or assemble this structure after inserting filament

Step 4-5

6.6 Step5 LCD assembly

Video (SD-Card: \Installation Instruction\Video\ 5-LCD-Assembly.mp4)



View from top



Parts:	
LCD unit	1pcs
Knob	1pcs
Screw PM3*40	4pcs
Hexagon nut M3	4pcs
Distance washer	8pcs
Frame unit I	1pcs

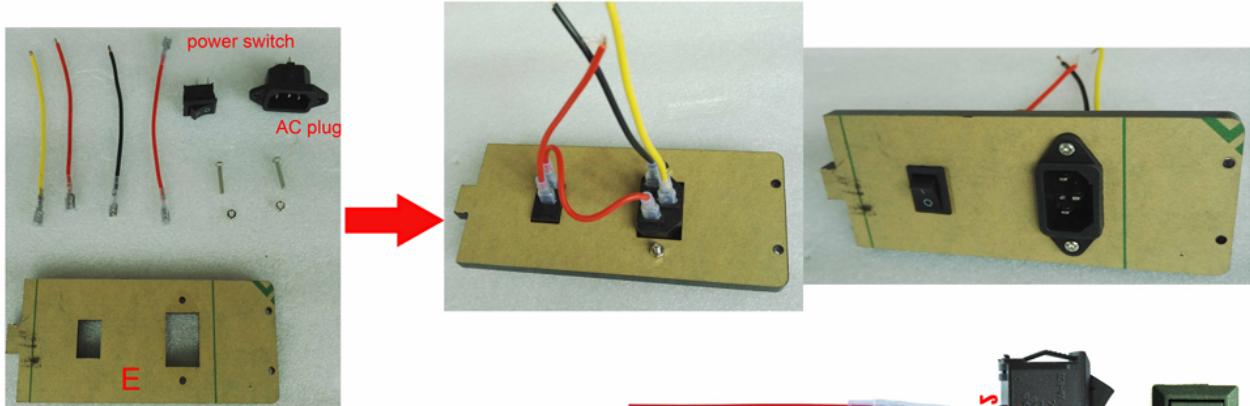
Step 5-1



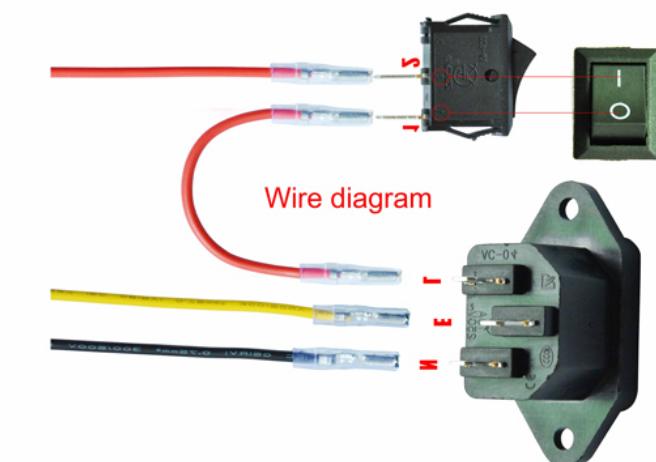
View from back

6.7 Step6 power and mainboard assembly

Video (SD-Card: \Installation Instruction\Video\ 6-Power and Mainboard Assembly.mp4)

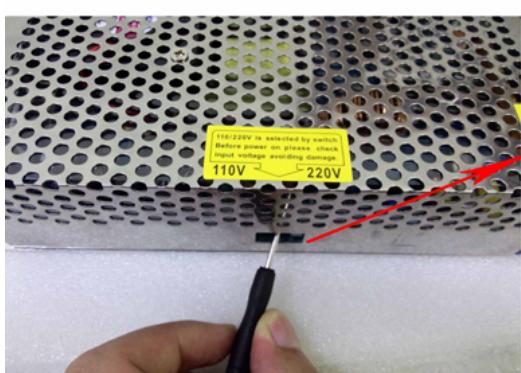
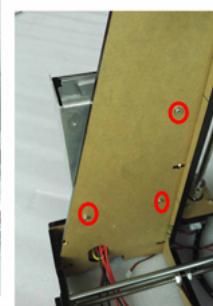
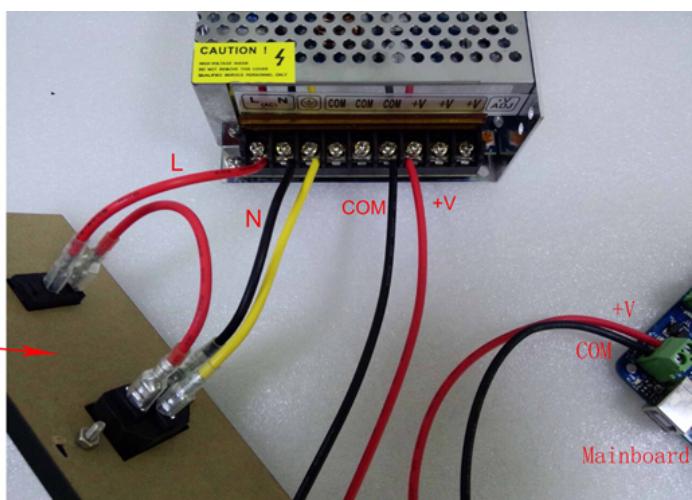


Parts:	
screw M3*18	2pcs
Hexagon screw nut M3	2pcs
Frame Unit E	1pcs
Power Switch	1pcs
AC Plug	1pcs
Power cable	4pcs



Step 6-1

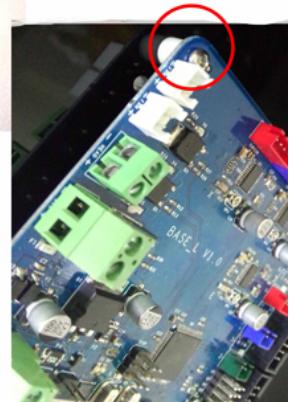
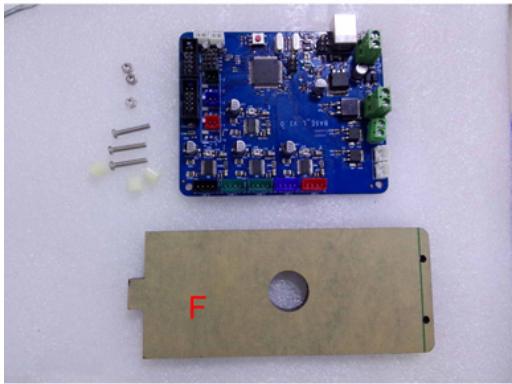
Parts:	
Power supply	1pcs
Hexagon screw M3*8	3pcs



Note: When the input voltage is 110V, please turn left toggle switch, the default input voltage is 220V

Step 6-2

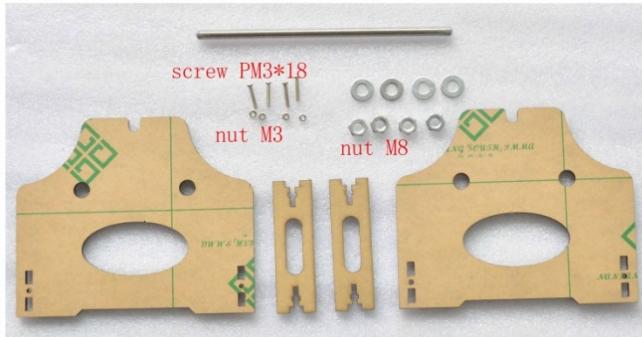




Step 6-3

6.8 Step7 Filament rack assembly

[Video](#) (SD-Card: \Installation Instruction\Video\ 7-Filament Rack Assembly.mp4)



Parts:

Frame unit T	2pcs
Frame unit U	2pcs
Hexagon nut M8	4pcs
Washer	4pcs
Screw PM3*18	4pcs
Hexagon nut M3	4pcs
Filament Rack screw rod	1pcs

Step 7-1

7. Testing and Commissioning

7.1 Power on test

When connecting the power supply to your printer, please make sure whether the power indicator light is on, LCD screen show correctly or not, hotbed and the extruder can be heated rightly or not, the thermistor, turbine fan and radiator fan works normally or not; (SD-Card:\ Installation Instruction\ Video\ Power On Inspection.mp4)

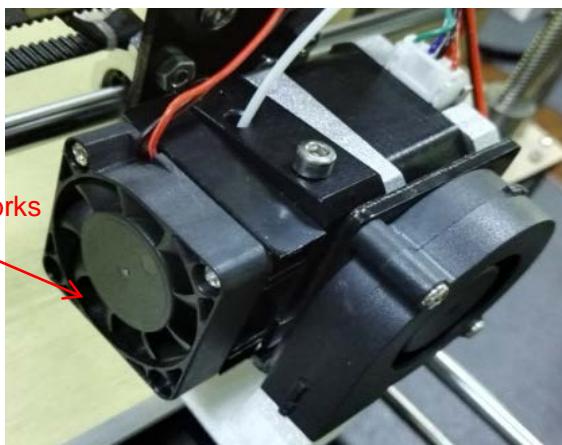
7.1.1 Turn on the power switch, LCD display, as shown in Figure

OK
X 25/0° Y 0 Z000.00
F100% SD---% o---:--
Mendel Ready.

NG
X 0/0° Y 0 Z000.00
F100% SD---% o---:--
Mendel Ready.

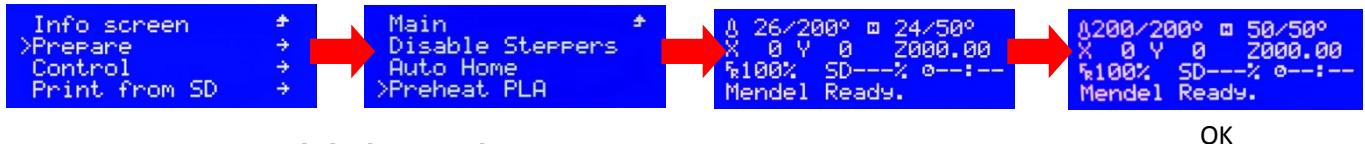
NG
X 0/0° Y 0 Z000.00
F100% SD---% o---:--
Err: MINTEMP

7.1.2 Fan check



7.1.3 Nozzle and hot bed heating inspection

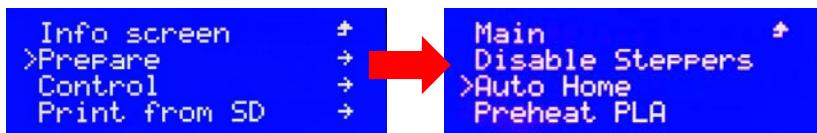
“Prepare” → “Preheat PLA”

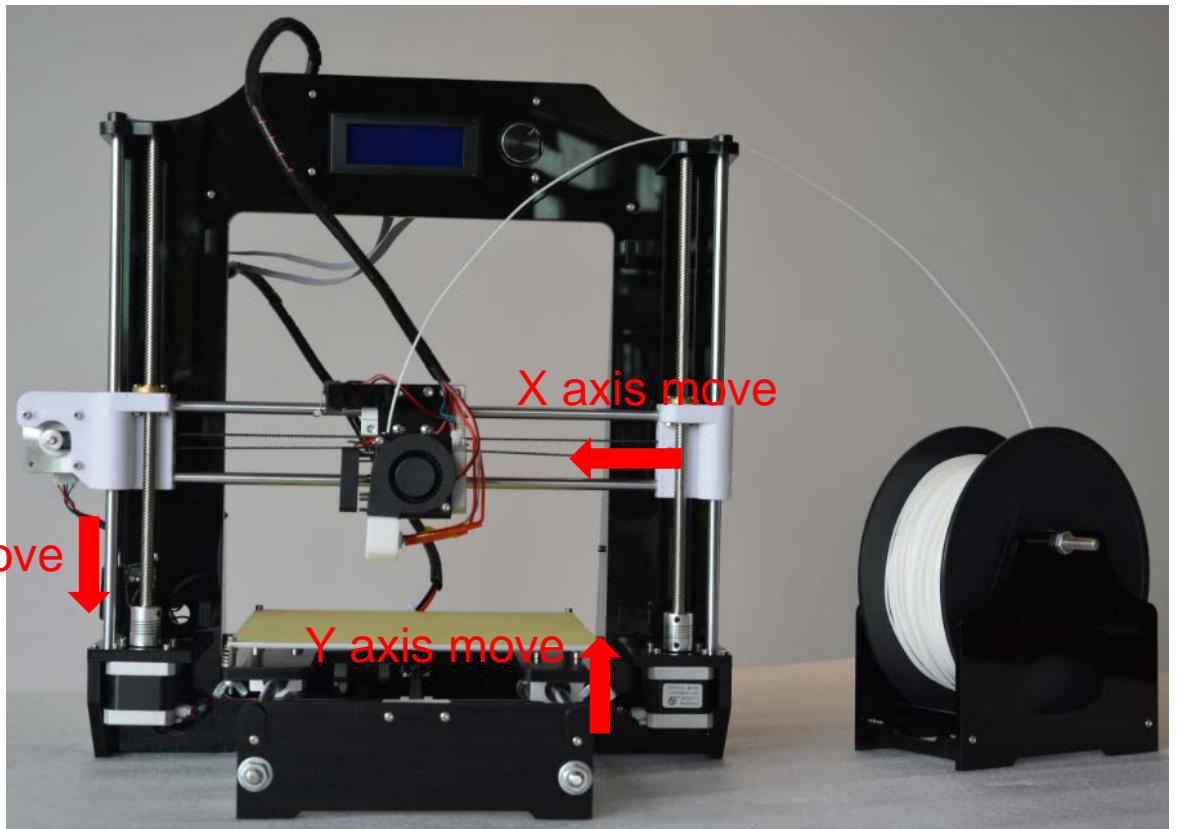


7.1.4 Back to the origin inspection

“Prepare” → “Auto Home”

X axis will move towards left, Y axis will move towards back, Z axis will move down, each axis will stop moving till their limit switch



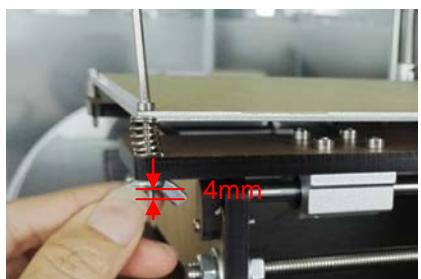


7.2 Hotbed leveling test:

Hotbed leveling test: Please make calibration to level the hotbed according to the video(SD-Card:\Installation Instruction\Video\Hot Bed Leveling.mp4)After assembling, you need to level the bed when firstly print

7.2.1 Rough Debugging to level hotbed

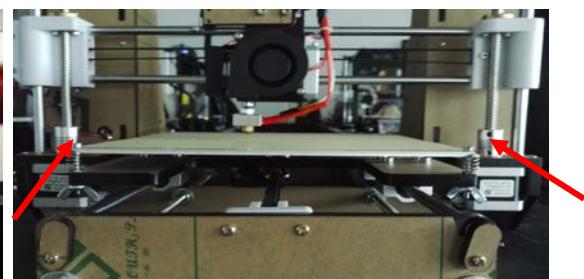
- 7.2.1.1 Adjust the screws at the 4 angle of the hotbed to make the screws 4mm out of the nut (Picture 7.1);
- 7.2.1.2 Move the nozzle as near as possible to the hotbed, and pull the extruder with hand to the upper everywhere of hotbed to check if the distance between the nozzle and 4 angle of hotbed is accordant(Picture7.2);
- 7.2.1.3 Hold the T coupling at left& right bottom of Z axis with hand and rotate it to make the nozzle to 4mm above the hotbed (Picture7. 3, 7.4)
- 7.2.1.4 Move the Z axis limit switch to the proper position, to make that the Z axis stop once the bottom of left Z axis nut support meet the sphere of limit switch (Picture 7.5)



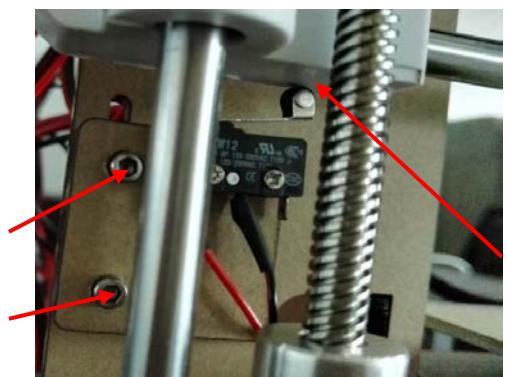
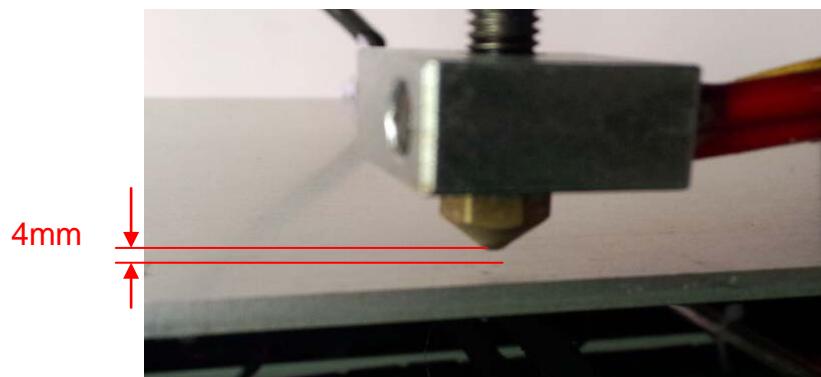
Picture 7.1



Picture 7.2



Picture 7.3



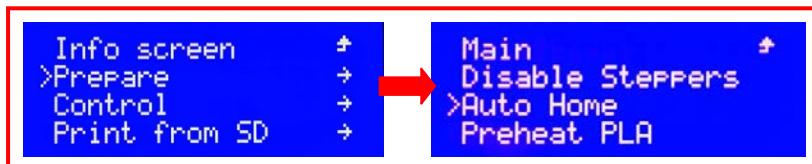
Picture 7.4

7.2.2 Accurate Debugging

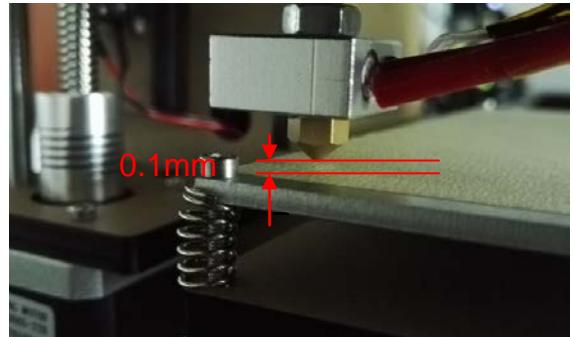
7.2.2.1 Auto home and make the XYZ axis back to origin (Picture 7.6);

7.2.2.2 Screw the screws at 4 angle of hotbed to make the nozzle above 1mm to the hotbed (Picture 7.7)

(PS: After Auto home, please click “Disable Steppers” or turn off the power, otherwise, you will can't move the XYZ axis by hand)



Picture 7.6

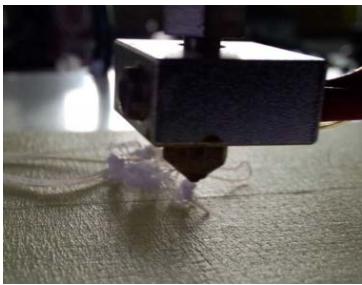


Picture 7.7

7.2.3 Fine Debugging when printing

Please check the printing status of first layer when you first printing by your printer. If you need, you can screw the screws at 4 angle of hotbed to the best position (as shown on picture 7.10)

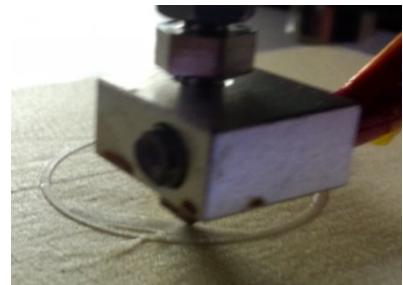
The different printing effect depends on the different distance between nozzle and hotbed:



Picture 7.8



Picture 7.9



Picture 7.10

The distance between nozzle and hotbed is too high

The nozzle is too close to hotbed

The distance between nozzle and hotbed is proper

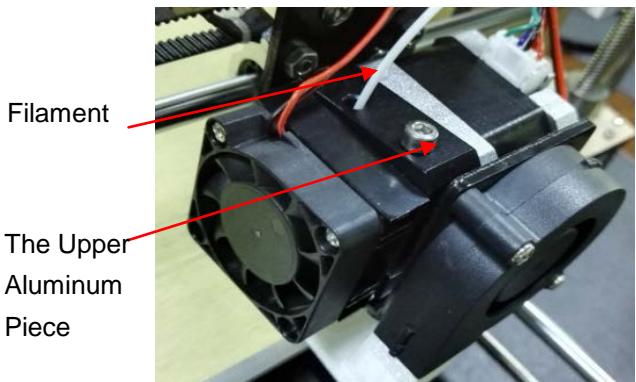
7.3 Change the Filament

Watch the video “Manually Change Filament” and get the operation way of this special feature of this printer (SD-Card: \Installation Instruction\Video\ Manually Change Filament.MP4)

7.3.1 Change the Filament when not printing

Pull out the filament: Firstly preheat the nozzle to the exact temperature(PLA: 200~220°C , ABS: 240~260°C) Once the temperature is up to the same as setting, press the upper aluminum piece on the extruder motor with left hand, meanwhile push down to extrude part of filament and then pull out it rapidly with right hand.(PS:Don't pause in the process to avoid the jam lead by the cooling midway. Picture 7.11, 7.12) (SD-Card: \Installation Instruction\Video\ Change Filament When Printing.MP4)

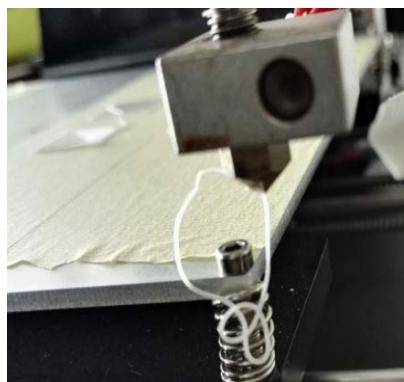
Insert the Filament: Press the upper aluminum piece on the extruder motor and meanwhile insert the filament into the throat (You can cut the filament into oblique angle with scissor to plug in smoothly. Picture 7.13), push down to extrude part of filament (Picture7.12), then let the aluminum piece go, finally clear up the filament extruded.



Filament

The Upper
Aluminum
Piece

Picture 7.11



Picture 7.12

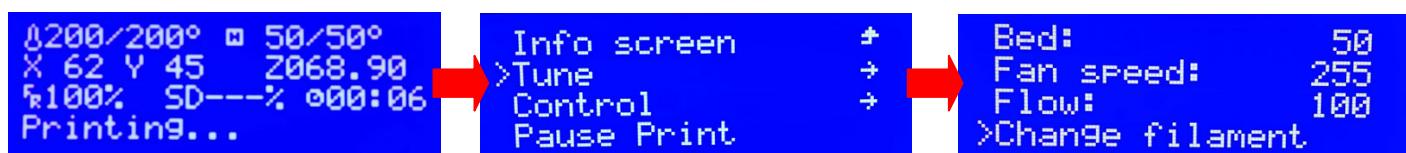


Picture 7.13

7.3.2 Change the Filament When Printing

7.3.2.1 Click “tune” → “change filament”; The printer stop working and the XY axis would be back to the origin, then the extruder would send back the filament from the printer automatically (Picture 7.14);

7.3.2.2 Change the filament manually and press the knob, then the printer would go on printing starting from the former position of printing model.



Picture 7.14

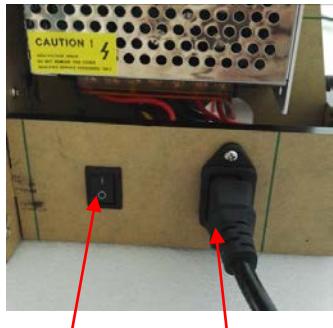


Picture 7.15

7.4 Feature Demonstration

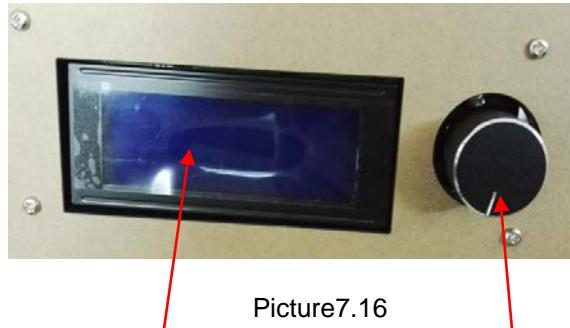
Feature Demonstration: watch the video “LCD Feature and Printing from SD Card” and get the operation way of all basic features; (SD-Card: \Installation Instruction\Video\LCD Feature and Printing From SD Card.MP4)

7.4.1 Instruction of Operation part for Off-line Printing



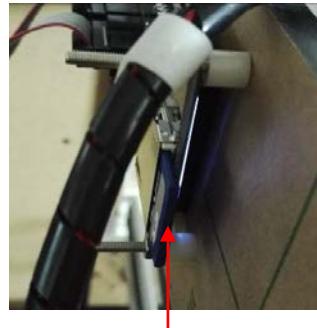
Power Switch

Outlet



LCD Screen

Knob



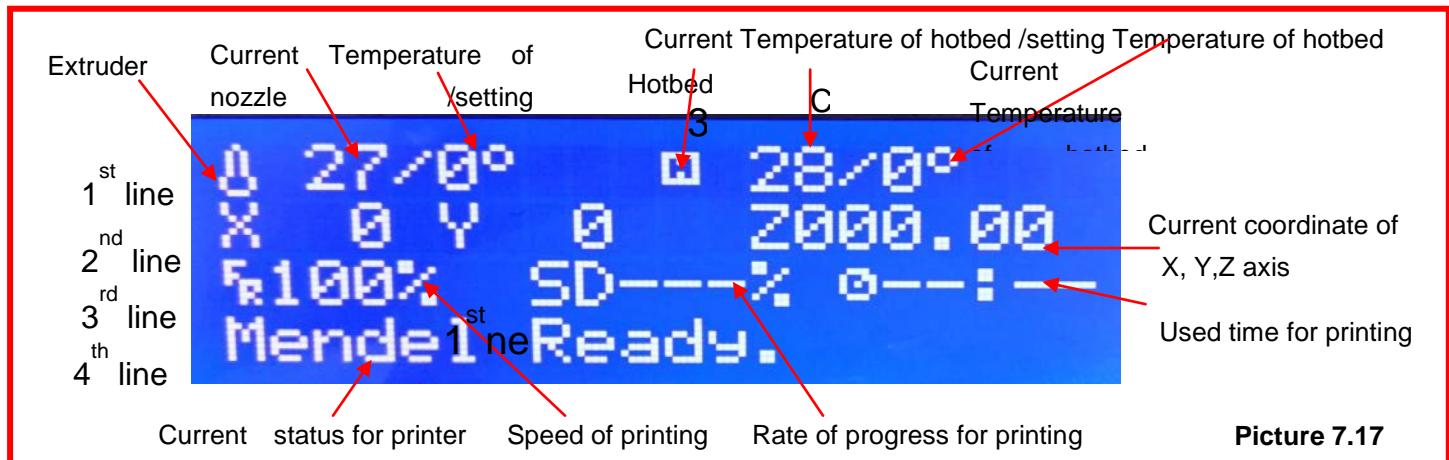
SD Card

Off-line printing operation for 3D printer constitutes 5 parts as below (as shown above Picture 7.16):

Power Switch, Outlet, LCD Screen, Spin Button, and SD Card

And you can control the knob easily and quickly by rotating and pressing.

7.4.2 The first Memo Interface



Picture 7.17

Plug the outlet and switch on, then access to the first memo interface (as shown on picture 7.17) which consist of the 4 parts as below:

temperature, XYZ coordinate system, Printing status, Current situation of system

1. 1st line

It will show the temperature of nozzle and hotbed, the two parts separated by "/" will show respectively before and after the current and setting temperature. Such as **26/200°**, it shows that setting temperature for nozzle is 180° and the current is 72°, it shows that setting temperature for hotbed is 70° and the current is 31°.

2. 2nd line

It will show the exact position of XYZ axis move onto in the printing.

3. 3rd line

It will show the speed and rate of progress of printing, and used time for printing. And it shows the multiple speed of printing which is set up in the slicing.“100%” means the exact speed and 200% means that printing by the speed 2 times as the one setting in slicing.

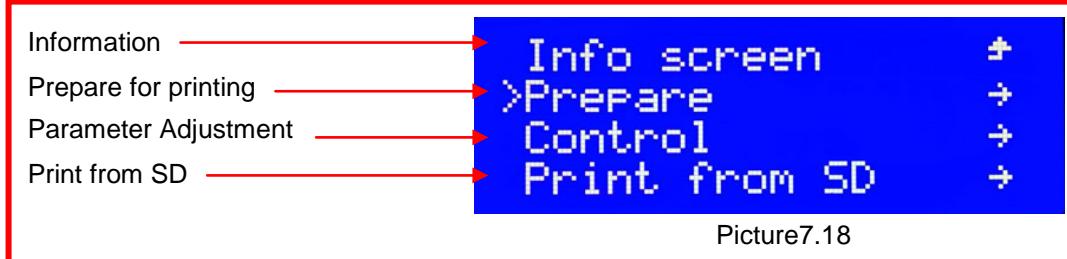
4. 4th line

It shows the current status of printer, such as **Mendel Ready.**, **Bed Heating.**, **Printing...**

7.4.3 The secondary memo interface

Press the knob and access to the 2nd memo interface, and it will show differently as below when the printer is working or not

7.4.3.1 The 2nd memo interface when not printing (as shown on picture 7.18)



Picture7.18

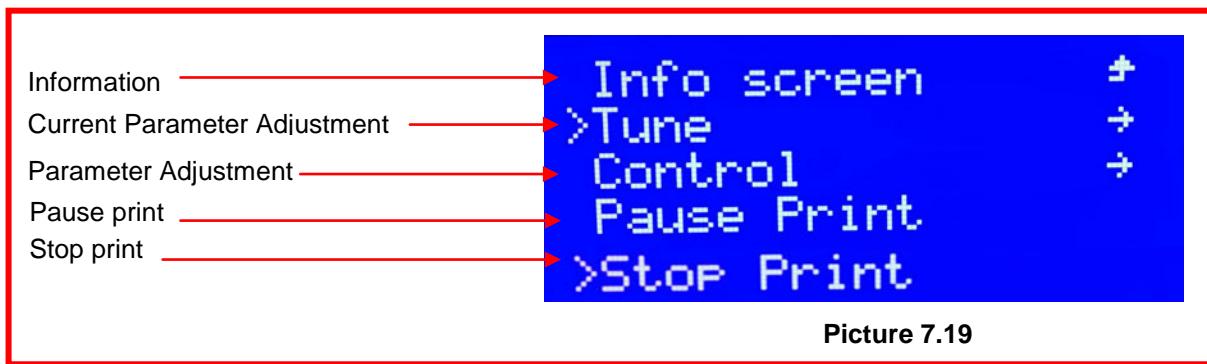
Click the (Info screen) and back the 1st page of memo interface

Click the (Prepare) and access to set up for printing prepare such as preheat the nozzle& hotbed, auto home, move the nozzle and hotbed

Click the (Control) and set up for the temperature of nozzle& hotbed, parameter of stepper motor, restoring the fail-safe, and storage memory etc.

Click the (Print from SD) and choose the printing file from the SD card, and it is sort of by copy time.

7.4.3.2 The 2nd memo interface when printing (as shown on picture 7.19)



Picture 7.19

Click the (Info screen) and back the 1st page of memo interface

Click the (Tune) and adjust the temperature of nozzle& hotbed, speed of fan when printing

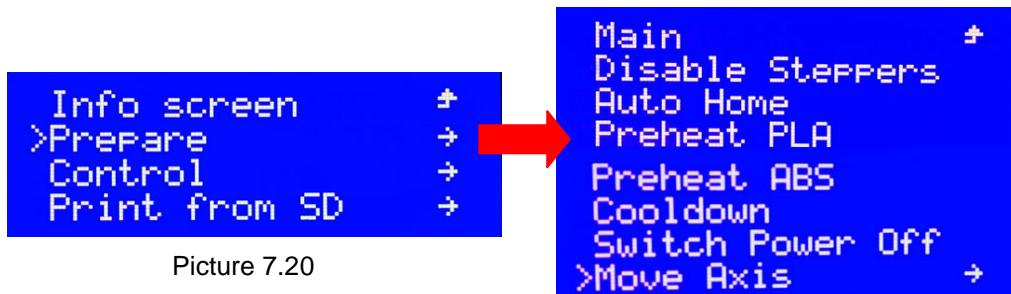
Click the (Control) and set up for the temperature of nozzle& hotbed, parameter of stepper motor, restoring the fail-safe, and storage memory etc.

Click the (Pause Print) and pause the printing

Rotate down the knob and click the (Stop Print) to stop printing

7.4.4 Prepare for printing (prepare)

7.4.4.1 When 3D printer not printing, rotate the knob and click “prepare” in the secondary memo interface (Picture 7.20) and then access to the 3rd memo interface (Picture 7.21)



Picture 7.21

(1) Unlock the disable stepper motor: click the (Disable Steppers) and then you can manual move the XYZ axis smoothly

(2) Click the (Auto Home) and the XYZ axis will move back to the origin

(3) Click the (Preheat PLA) and then the nozzle would be heating up to the same as the setting temperature for PLA, meanwhile, the LCD will also go back to the first memo interface.

(4) Click the (Preheat ABS) and then the nozzle would be heating up to the same as the setting temperature for ABS, meanwhile, the LCD will also go back to the first memo interface

(5) Click the (Cool down), the temperature for nozzle and hotbed would be cool down to 0°automatically.

(6) Click the (switch power off) to turn off the power (it is not put into use at present)

(7) Click the (Move Axis) to control the move of XYZ, input & output the filament. Please don't take the 10mm as unit for Z axis movement and input& output the filament (extruder).

7.4.5 Move the axis and input& output the filament (Move Axis)

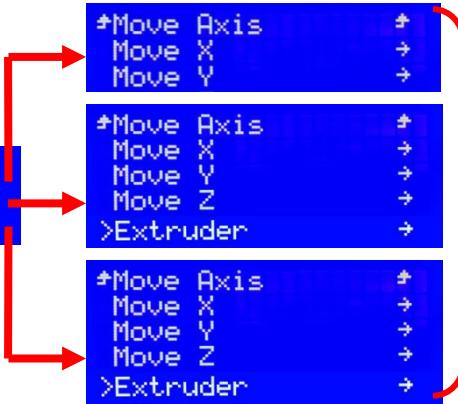
Click the “Move Axis” and do as the guide to all parts, then you will access to the 4th(Picture 7.23), 5th(Picture 7.24), and 6th(Picture 7.25) memo interface step by step. And then you could only take the 1mm & 0.1mm as unit for the Z axis movement and input & output filament (extruder).

Preheat ABS
Cooldown
Switch Power Off
>Move Axis

Prepare
Move 10mm
>Move 1mm
Move 0.1mm

Picture 7.22

Picture 7.23



X: +000.0
Y: +000.0
Z: +000.0
Extruder: +001.0

Picture 7.25

Picture 7.24

PS: The axis movement is based on current coordinate and it can only move to the positive direction.

The extruder could move to the positive& negative direction to input& output the filament.

7.4.6 The Parameter Adjustment when not printing (Control)

When not printing, you can rotate the knob and click the "Control" at the secondary memo interface (Picture 7.26), then you will access to the 3rd (Picture 7.27), 4th (Picture 7.28) and 5th memo interface and make setting accordingly

Info screen
Prepare
>Control
Print from SD

Main
Temperature
>Motion
Restore Failsafe

Picture 7.26

Picture 7.27

Control
>Nozzle: 200
Bed: 50
Fan speed: 255
Autotemp: Off
0 Min: 200
0 Max: 250
>0 Fact: 000.10
PID-P: +021.73
PID-I: +001.54
PID-D: +076.55
PID-C: 1
>Preheat PLA Conf
>Preheat ABS Conf

Picture 7.28

*Temperature
Fan speed: 0
Nozzle: 200
Bed: 50

*Temperature
Fan speed: 0
Nozzle: 245
Bed: 100

Picture 7.30

*Control
Z Offset: 000.00
Accel: 3000
Uxy-Jerk: 20
Uz-Jerk: +000.40
Ve-Jerk: 5
Vmax x: 500
>Vmax y: 500
Vmax z: 5
Vmax e: 25
Vmin: 0
>UTrav min: 0
Amax x: 9000
Amax y: 9000
Amax z: 100
>Amax e: 10000
A-retract: 3000
Xsteps/mm: +100.00
Ysteps/mm: +100.00
Zsteps/mm: +0400.0
>Esteps/mm: +0096.0

Picture 7.29

The PID defines the temperature adjustment.
As usual, you needn't to manual adjust these three variables since there are instructions of automatic optimizing for PID.

Picture 7.29

Nozzle: Temperature of nozzle
Bed: Temperature of hotbed
Fan speed: Adjust the speed of fan
Auto temp: automatic temperature
Min: The minimum temperature of nozzle
Max: The maximal temperature of nozzle
Fact: current temperature of nozzle
PID-P: The kp value of PID
PID-I: The ki value of PID
PID-D: The kd value of PID
PID-C: The ration of PID
Preheat PLA Conf(setting for preheat PLA)
Preheat ABS Conf(setting for preheat ABS)

Picture 7.29

Z offset: Z axis offset

Accel: accel

Vxy-jerk: The speed variation of XY axis with no need acceleration

Vz-jerk: The speed variation of Z axis with no need acceleration

Ve-jerk: The speed variation of Extruder with no need acceleration

Vmax X: The maximal speed of X axis

Vmax Y: The maximal speed of Y axis
 Vmax Z: The maximal speed of Z axis
 Vmax E: The maximal speed of Extruder
 Vmin:
 VTrav min: The Maximal speed of quicken enablement
 Amax X: The maximal acceleration speed of X axis
 Amax Y: The maximal acceleration speed of Y axis
 Amax Z: The maximal acceleration speed of Z axis
 Amax E: The maximal acceleration speed of Extruder
 A-retract: The acceleration at * mm/s
 Xsteps/mm: The distance of each step for X axis motor
 Ysteps/mm: The distance of each step for Y axis motor
 Zsteps/mm: The distance of each step for Z axis motor
 Esteps/mm: The distance of each step for Extruder motor

Picture 7.30

FAN Speed: Adjust the speed of fan

Nozzle : When not printing, you can set up the temperature of nozzle according to filament you used.

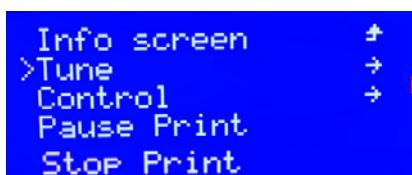
As usual, the temperature for PLA is up to 180-200°and for ABS is 230-250°

Bed: When not printing, you can set up the temperature of hotbed according to filament you used.

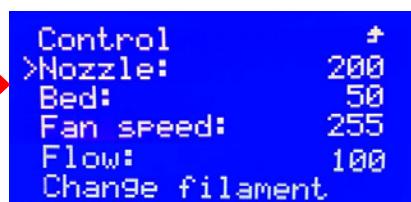
As usual, the temperature for PLA is up to 50-70°and for ABS is 90°

7.4.7 Real-time parameter adjustment (Tune)

7.4.7.1 Only when the 3D printer working, the secondary memo interface would be show as picture 7.31. And click the “Tune” to access to the 3rd memo interface (Picture 7.32), and then you can adjust the parameter by rotating knob.



Picture 7.31



Picture 7.32

Speed (speed of printing): Adjust the speed of printing by rotating the knob

You can also the speed of printing by rotating the knob directly at the first memo interface

Nozzle (the setting temperature of nozzle): You can adjust the temperature of nozzle when printing, then the nozzle would be heating up to the temperature as you set.

Bed (the setting temperature of hotbed): When printing, you can adjust the temperature of hotbed if you find the setting temperature by slicing is too high or too low. Then the hotbed would be heating up to the temperature as you set.

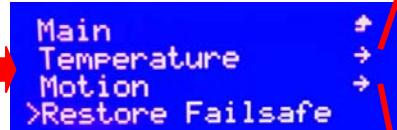
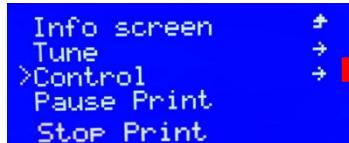
Fan speed (speed of fan): As usual, it is not necessary to adjust the speed of fan, but you can also set up it by your choice.

Flow (measure of extrusion): The unit for flow is percentage and you can set up it to the proper quantity if you find out it is not enough or too much when printing

Change filament::Click it and the nozzle would be back to origin, then the filament feed roll would roll back to output the filament automatically

7.4.8 Parameter adjustment when printing (Control)

When 3D printer printing, the secondary memo interface would be shown as (Picture 7.18), click the “Control” to access to the 3 (Picture 7.27) 4 (Picture 7.28,7.29), ,5 (Picture 7.30)memo interface



```

Control      +
>Nozzle:    200
Bed:        50
Fan speed: 255
Autotemp:   Off
  & Min:    200
  & Max:    250
>& Fact:   000.10
PID-P:     +021.73
PID-I:     +001.54
PID-D:     +076.55
PID-C:     1
Preheat PLA Conf +
>Preheat ABS Conf +

```

Picture 7.35

```

*Temperature +
Fan speed: 0
Nozzle:    200
Bed:        50
*Temperature +
Fan speed: 0
Nozzle:    245
Bed:        100

```

Pict2ure 7.37

You needn't to adjust it since all the setting on Picture 7.35, 7.36 & 7.37 is almost the same as the one on Picture 7.28, 7.29 & 7.30

```

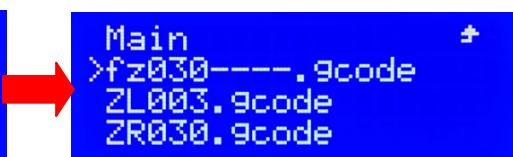
*Control      +
Z Offset:  000.00
Accel:      3000
Vxy-Jerk:  20
Vz-Jerk:   +000.40
Ve-Jerk:   5
Umax x:    500
>Umax y:   500
Umax z:    5
Umax e:    25
Umin:      0
>UTrav min: 0
Amax x:    9000
Amax y:    9000
Amax z:    100
>Amax e:   10000
A-retract: 3000
Xsteps/mm: +100.00
Ysteps/mm: +100.00
Zsteps/mm: +0400.0
>Esteps/mm: +0096.0

```

Picture 7.36

7.4.9 Print from SD

When 3D printer is not printing, click “print from SD” and access to 3rd page of memo interface (Picture 7.39) then start printing by choosing the “.g code” file



8. Printing Test

After all the above-mentioned test and you make sure the printer works well. Now you can get start a printing test. Please insert the SD Card into the card slot on the left back of the screen and then choose the “test-* .g code” file and start printing with rotating the spin button. (SD-Card: \Installation Instruction\Video\Test Print.mp4)

Congratulations! You've already accomplish the whole assembly for the M508. Please feel free to contact our customer service if you have any problem on technology or other. We will spare no effort to settle your problems accordingly. As you complete the printing test, you would be pride of yourself by creating the first 3D printer work. And welcome to share your amazing and successful DIY experience to our page online (www.alunar.net)

9. Senior Instruction

9.1 Off-line Printing

Off-line Printing: copy the “X.gcode” file to the SD card and insert the card into your printer, then start your printing directly. And you need to change it to “X.gcode” if the file you want to print is “X.STL”.

How to use slicing software: Please open the “SD-Card: \ Software\Slicing software” and click the software “Cura 15.04” to slice the printing file as per the use manual shown on “How to use Cura 15.04”.

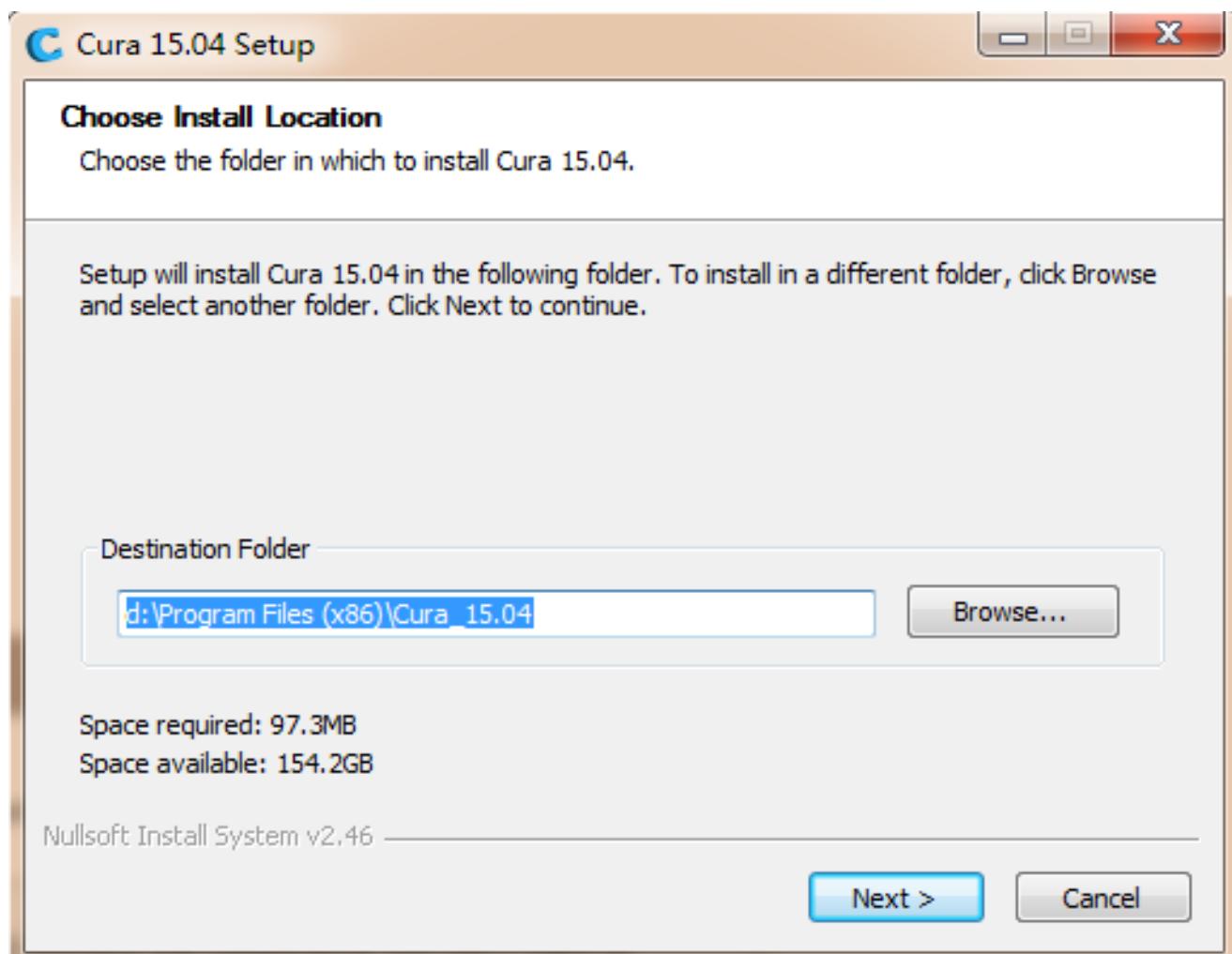
9.1.1 How to use Cura 15.04

Note:

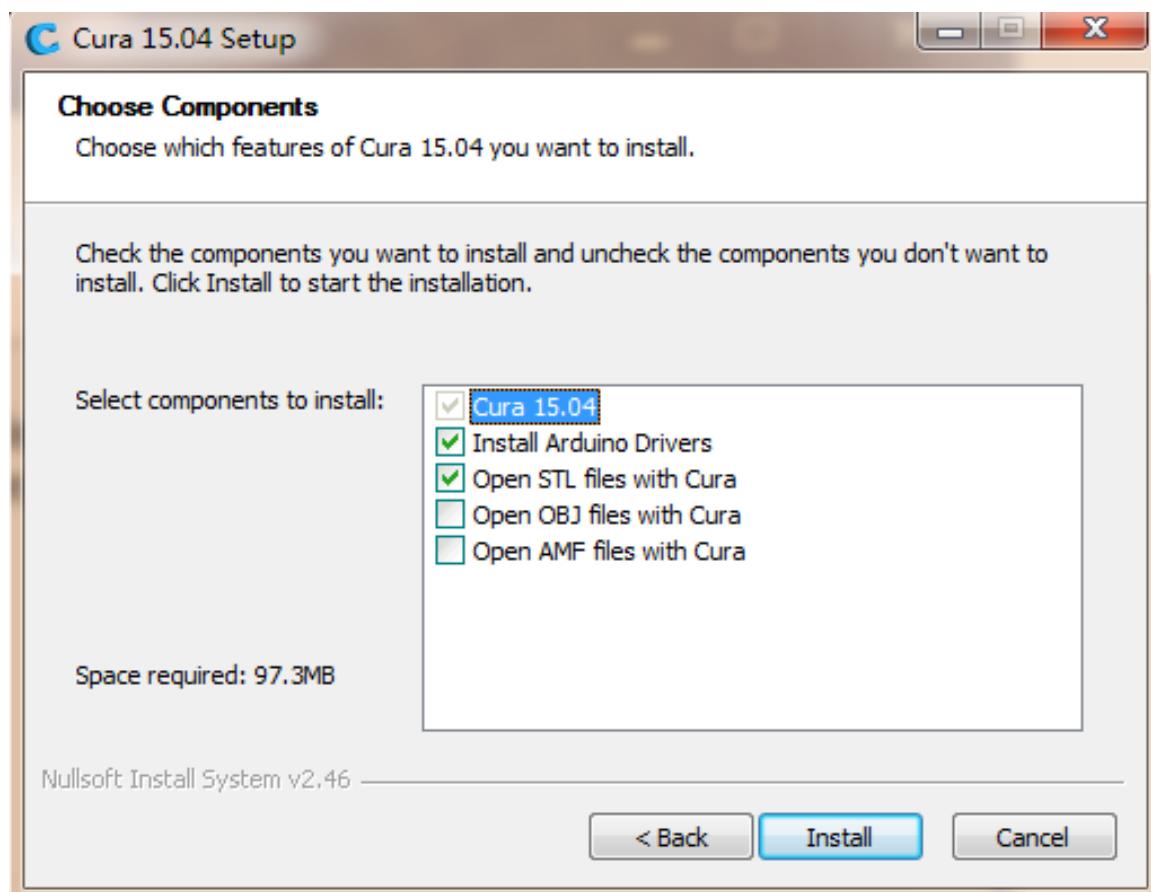
- (1).We advise new user to use Cura for Slicing.
- (2).The data you will slice depend on the item you need to print.
- (3).Before you start printing, please make sure the parts of printer work well and the distance between nozzle and hotbed is about 0.1mm (A4 Paper thickness).

Ps: Most data was default, you need to change them depends on the object you want to print.

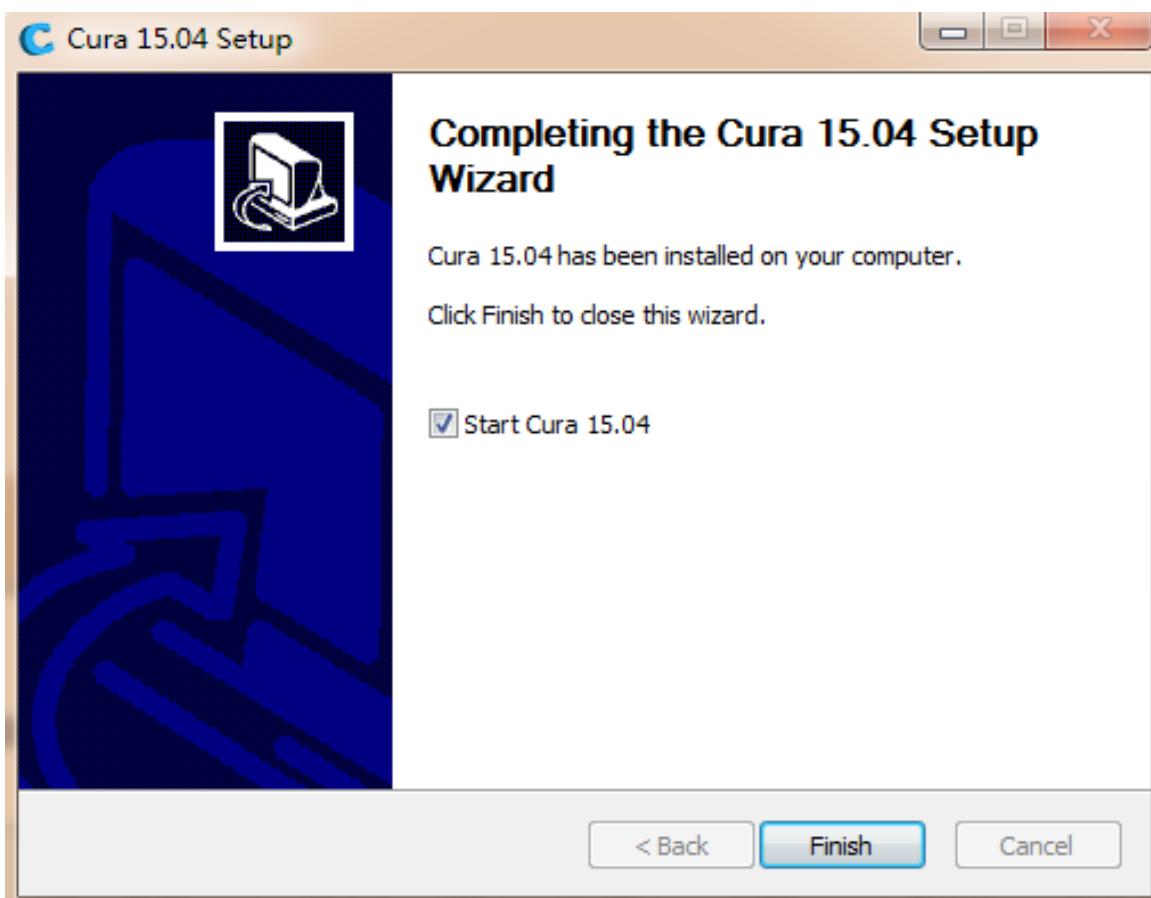
Step1:



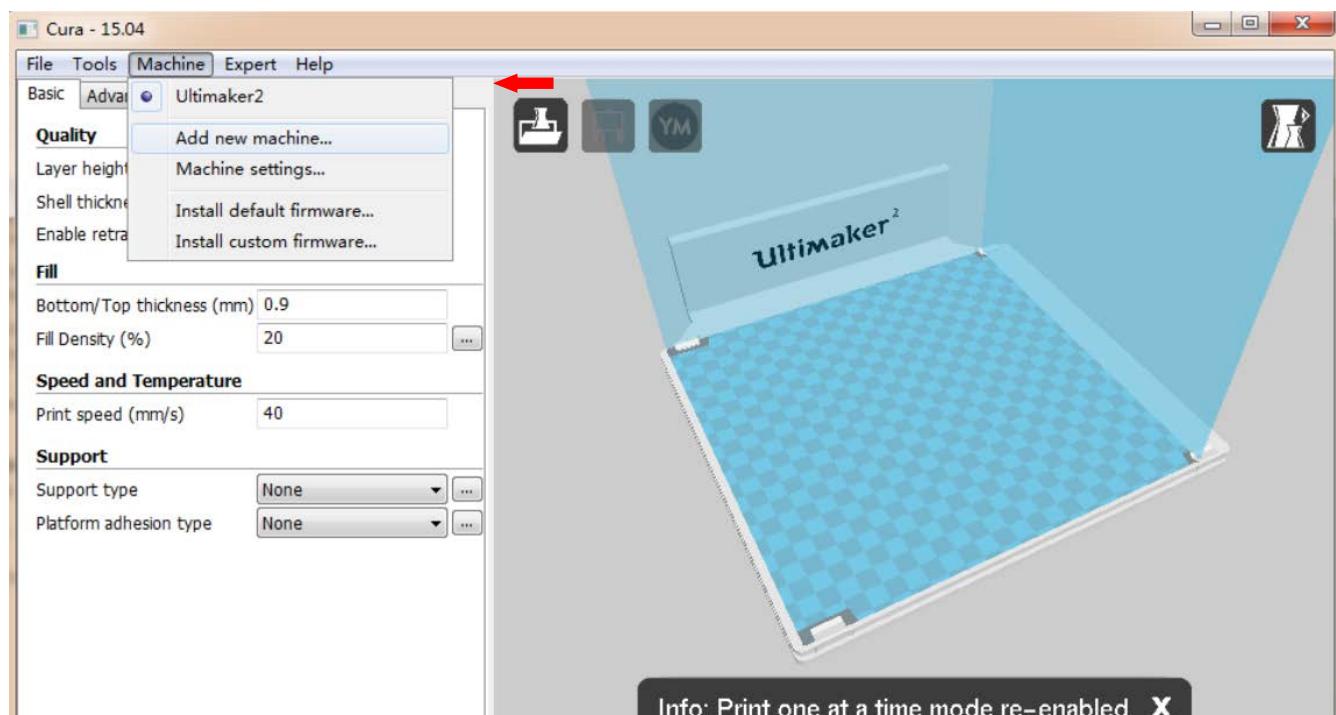
Step2:



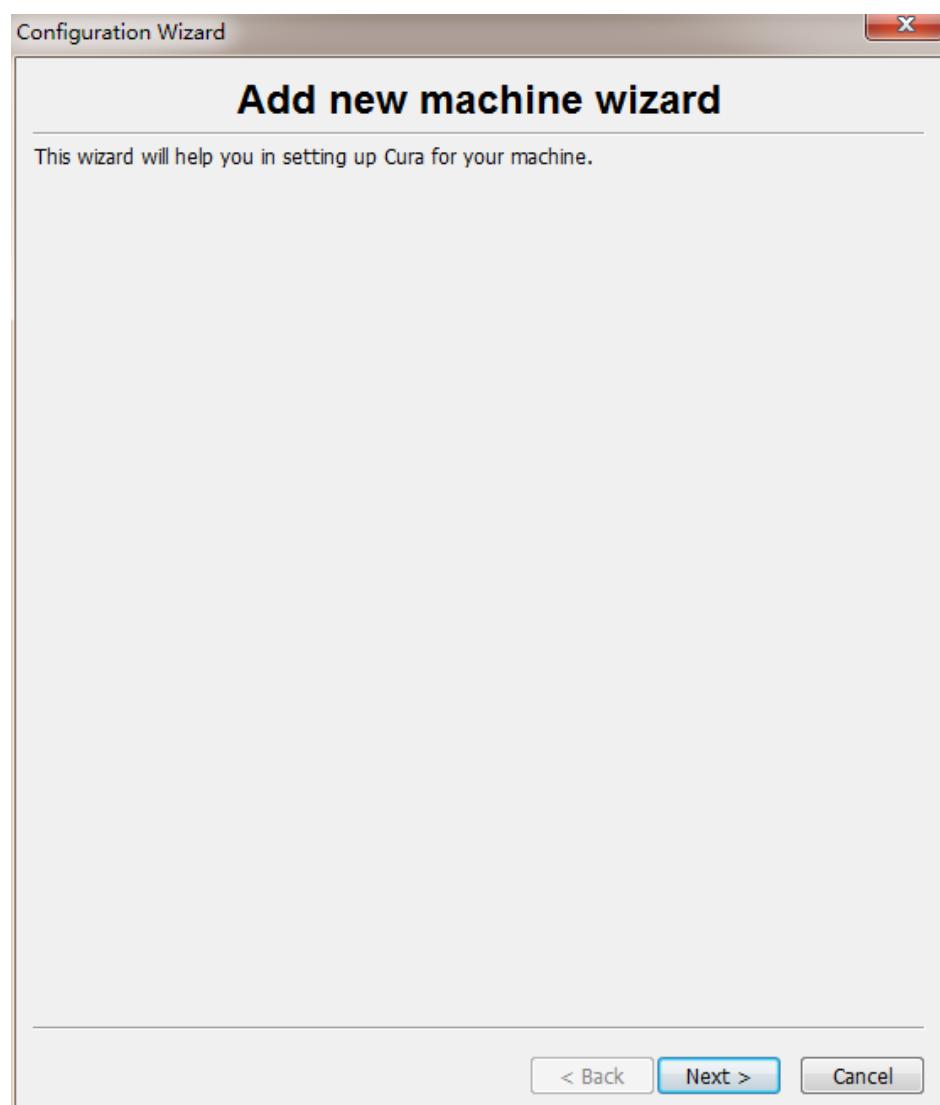
Step3:

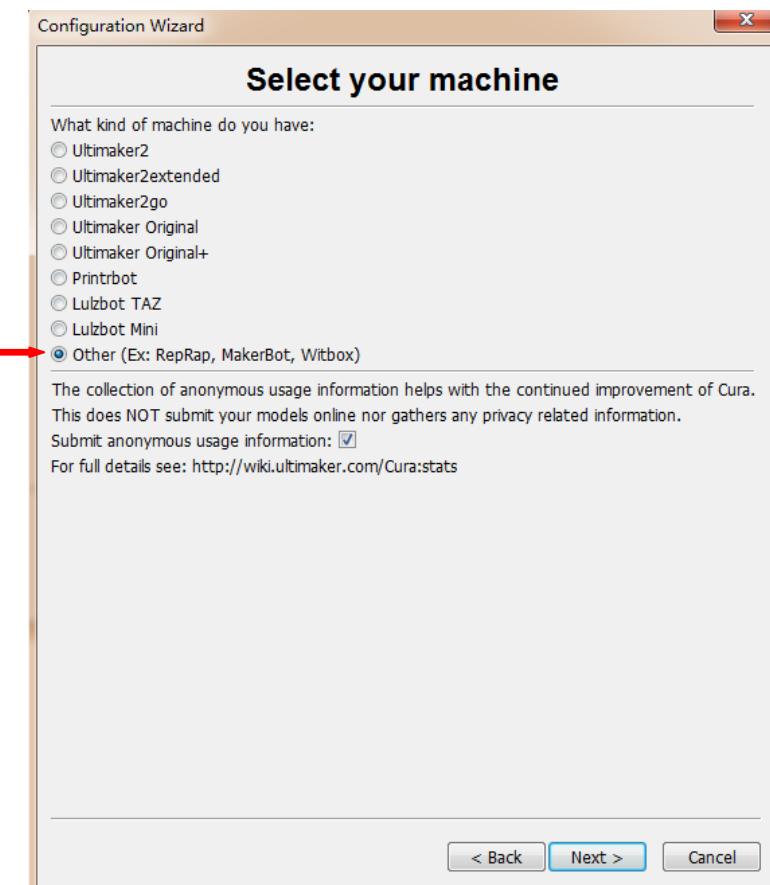
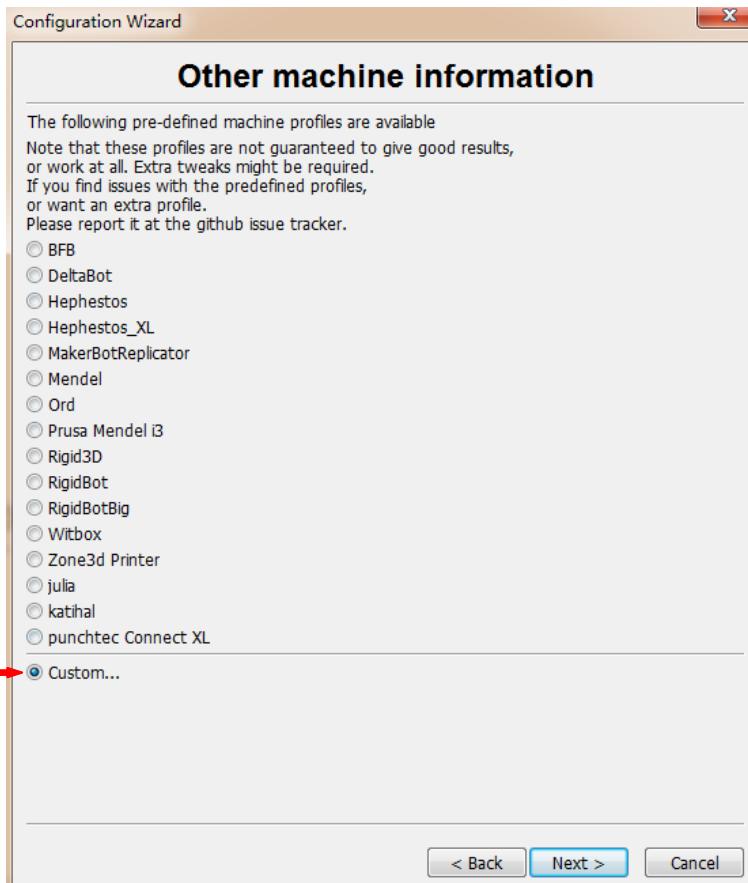


Step4:

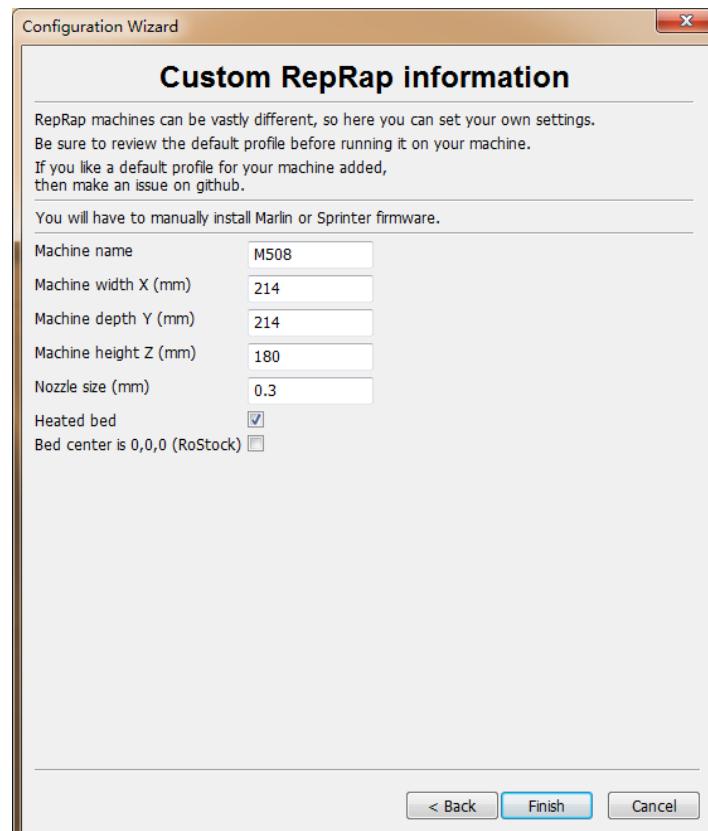


Step5:

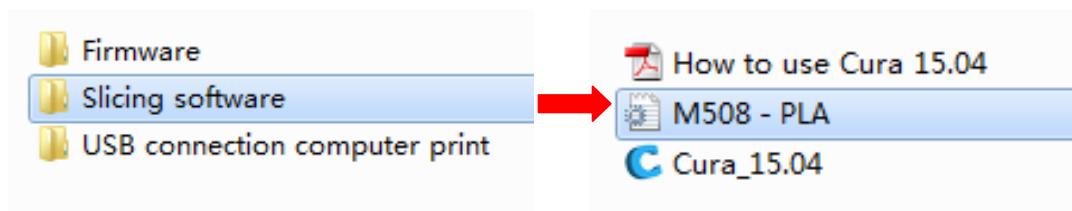
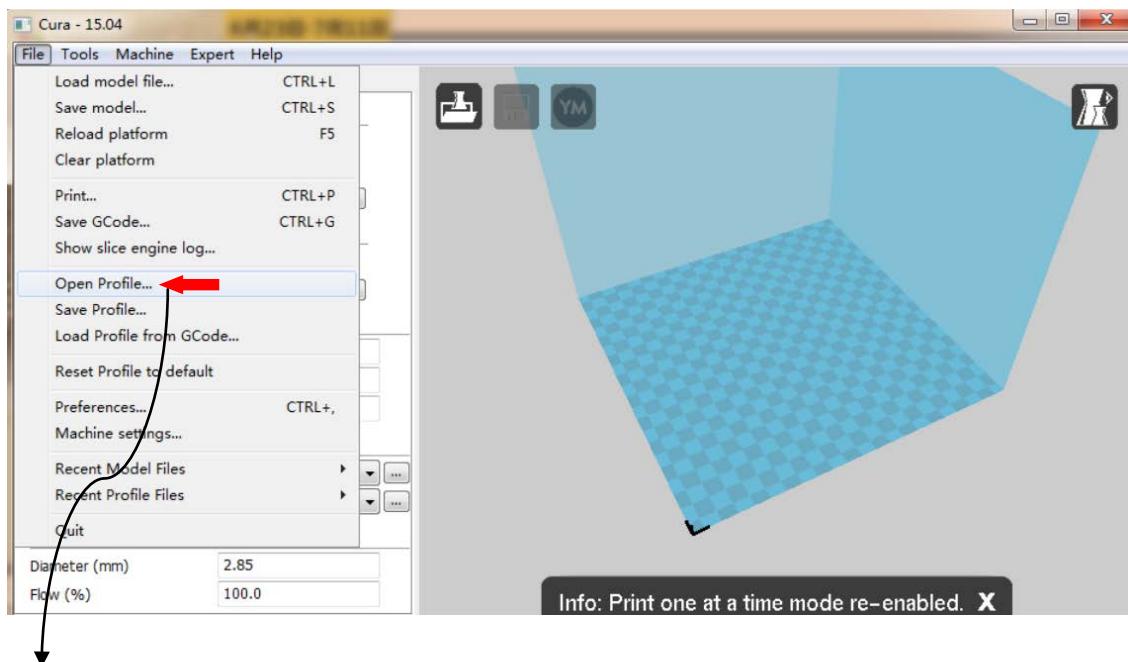


Step6:**Step7:**

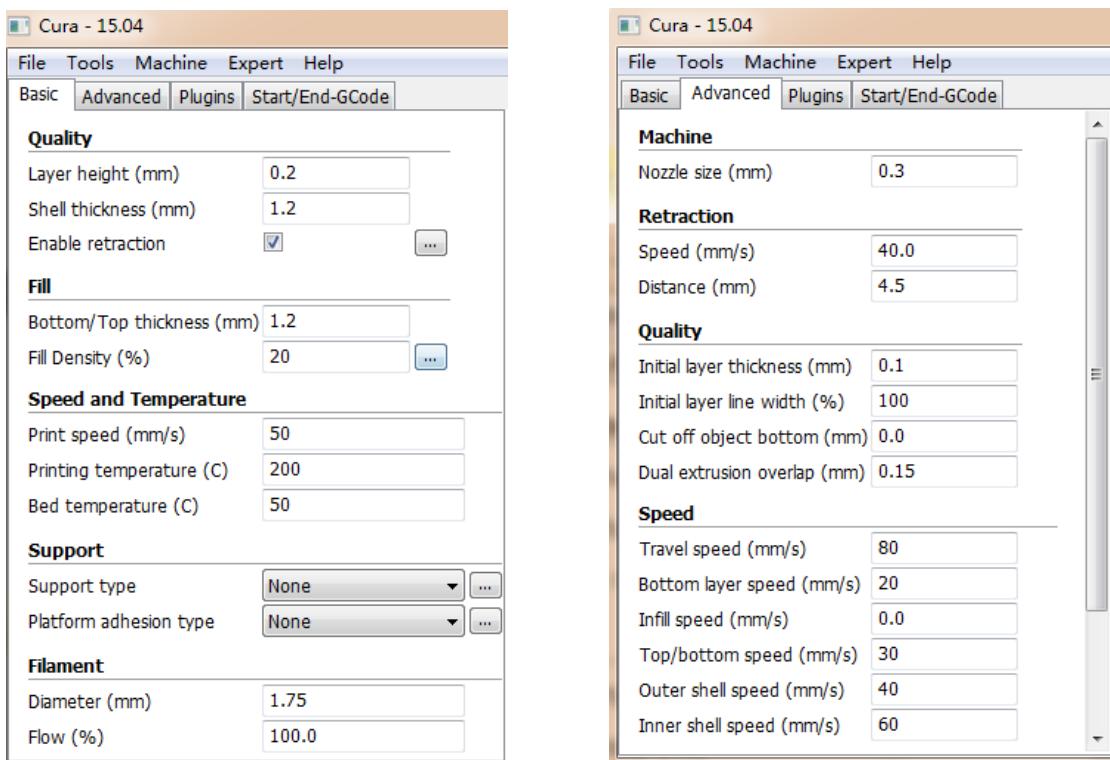
Step8:



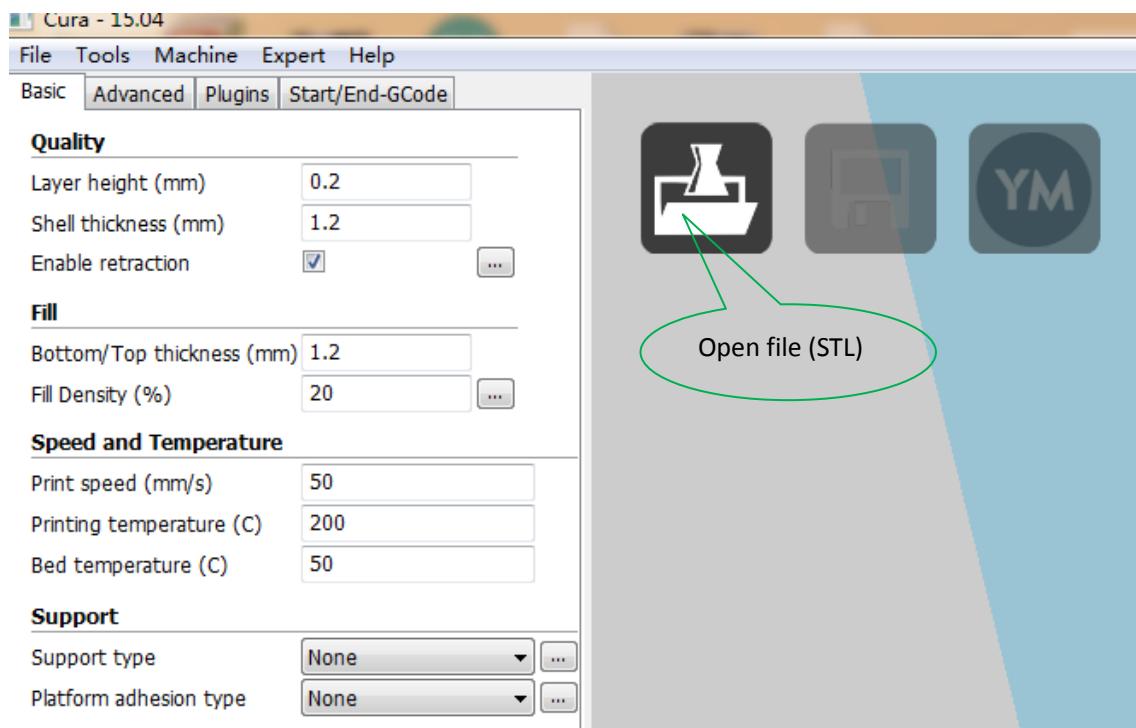
Step9:



Step10:



Step11:

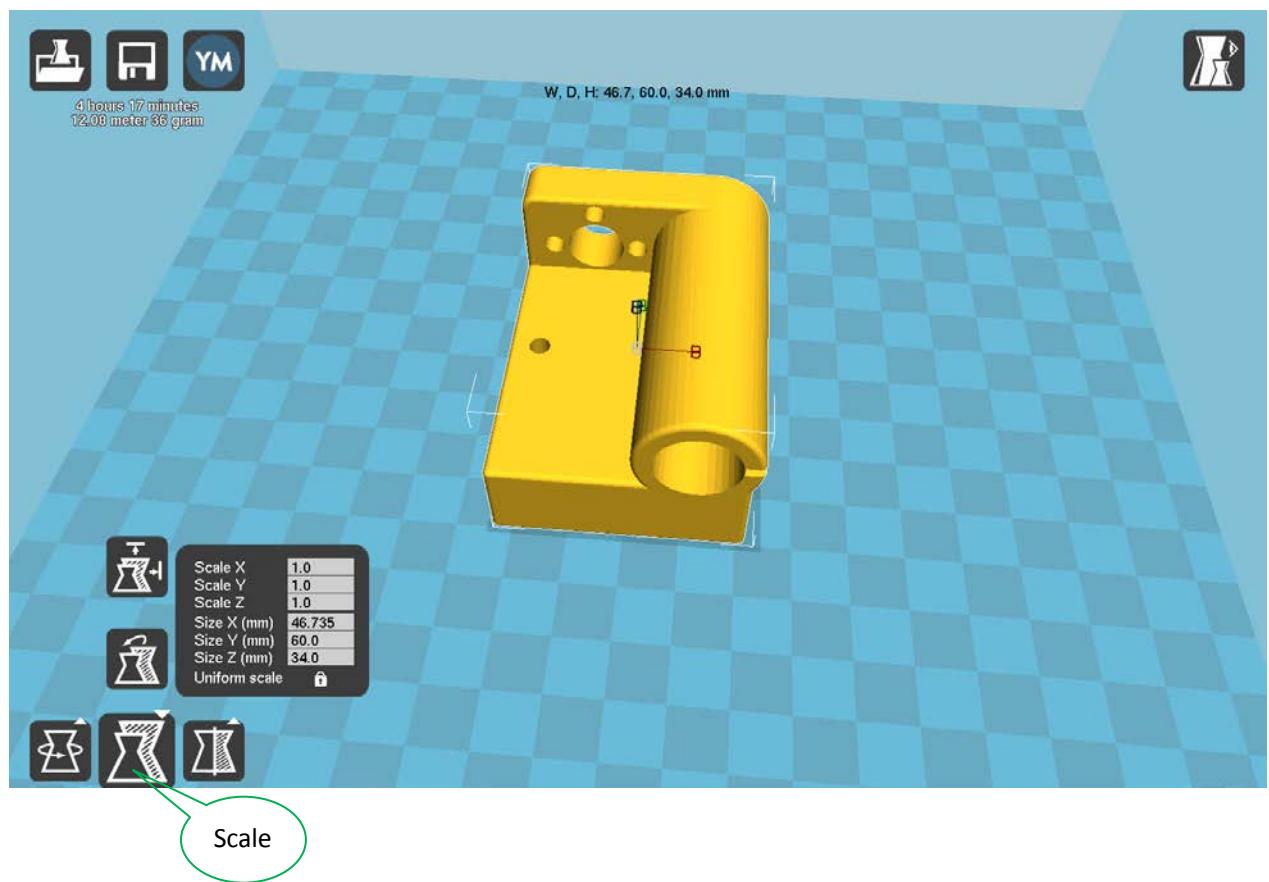


Step12:

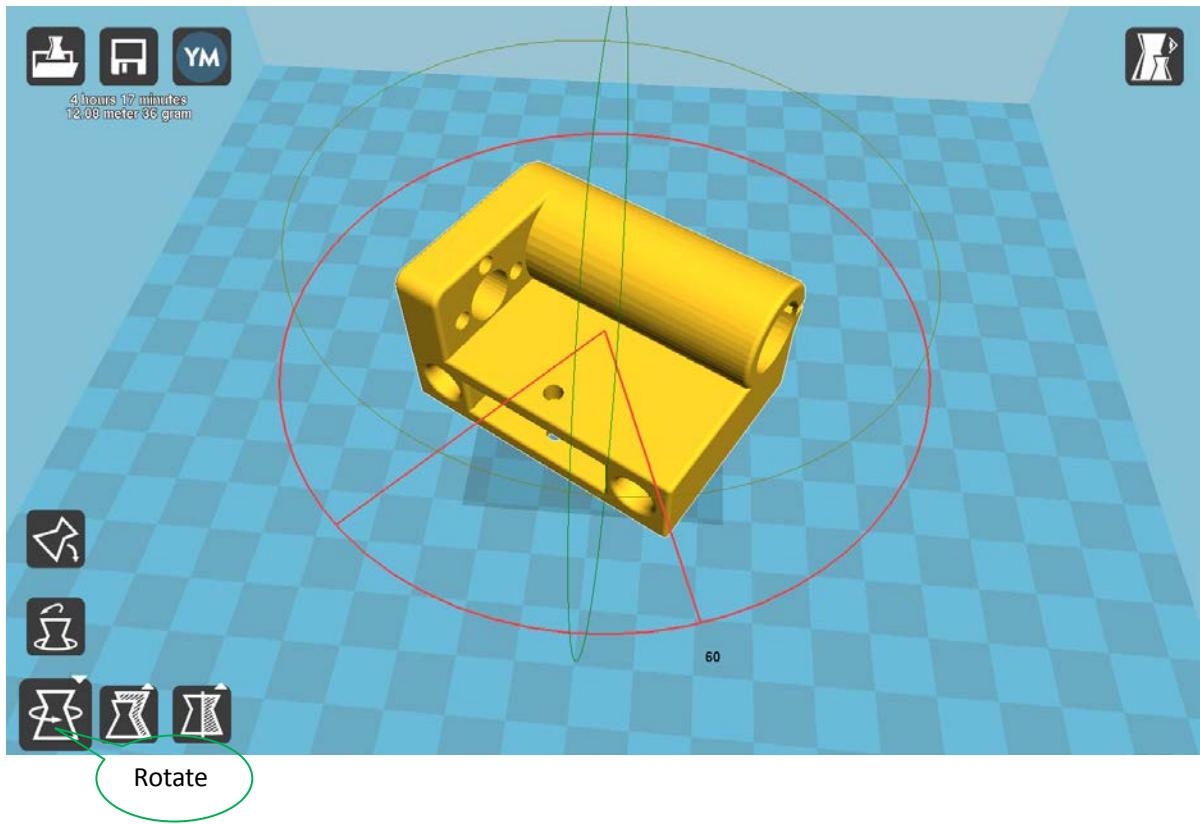
FZ-	2016/6/13 16:15	STL 文件	36 KB
YZ	2016/6/13 16:16	STL 文件	57 KB
Z-left	2016/6/13 16:12	STL 文件	165 KB
Z-right	2016/6/13 16:14	STL 文件	634 KB



Step13:



Step14:



Step15:



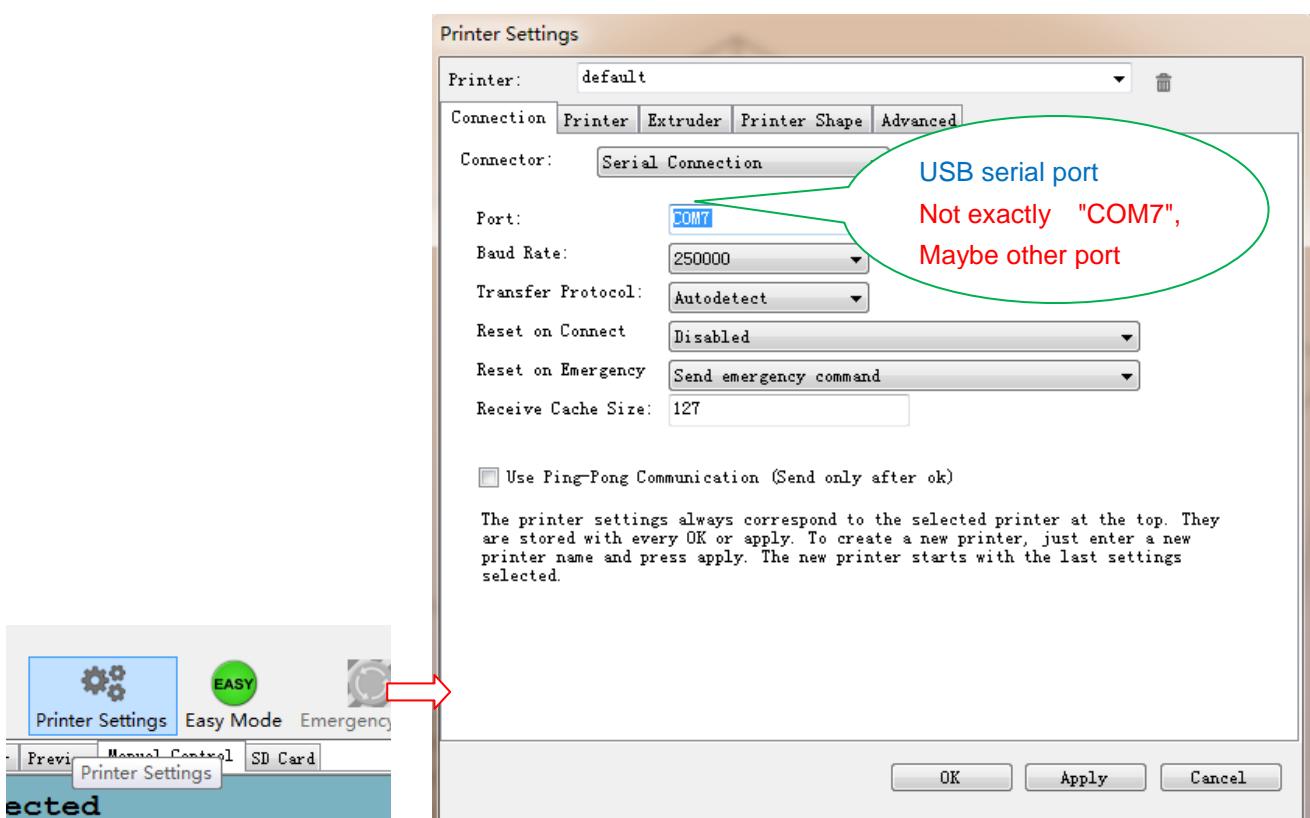
9.1.2 Online Printing

1. Online Printing: Connect the printer to your computer and then you can get start printing by computer control.

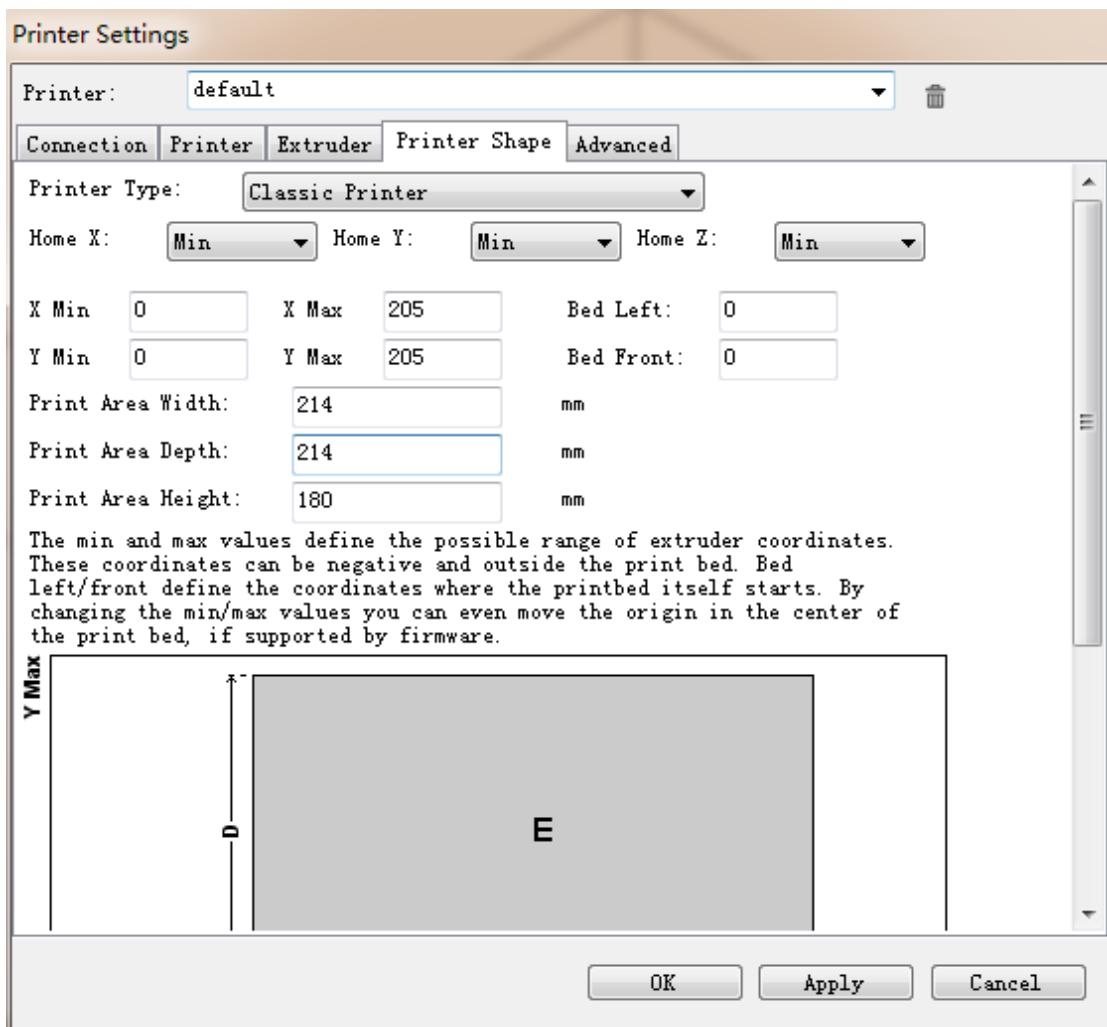
Connecting to your computer with USB cable: Please open the “SD-Card: \ Software \RepetierHost_1_0_6” and click the software“RepetierHost_1_0_6”, then you can start printing with slicing the printing file by Repetier according to “How to use Repetier”.

Note: How to set up 3D printer and computer connection

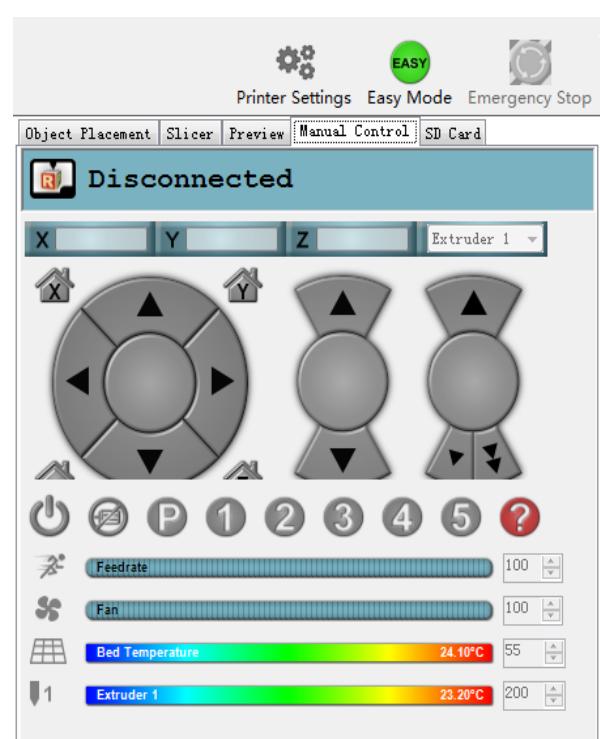
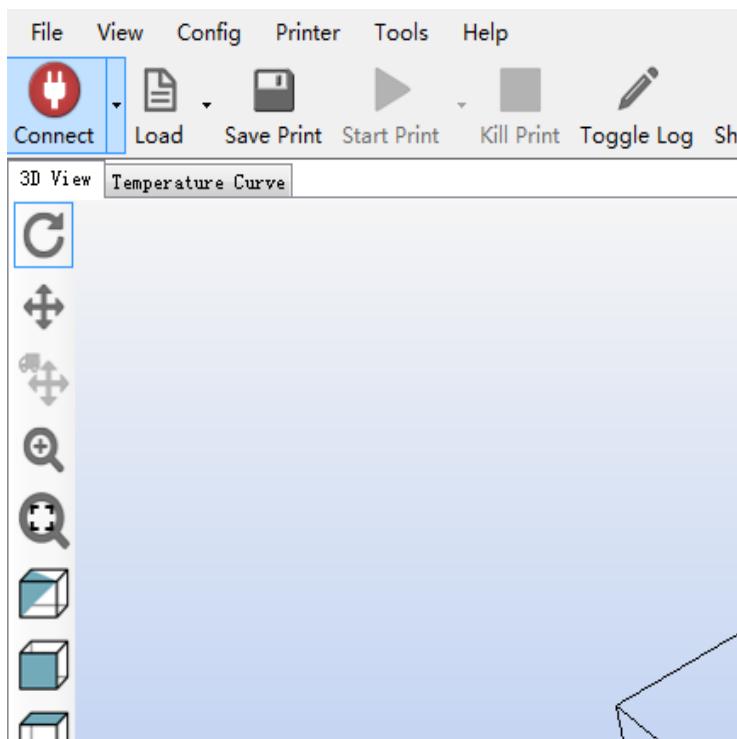
Step1: Choose the correct baud rate and COM port



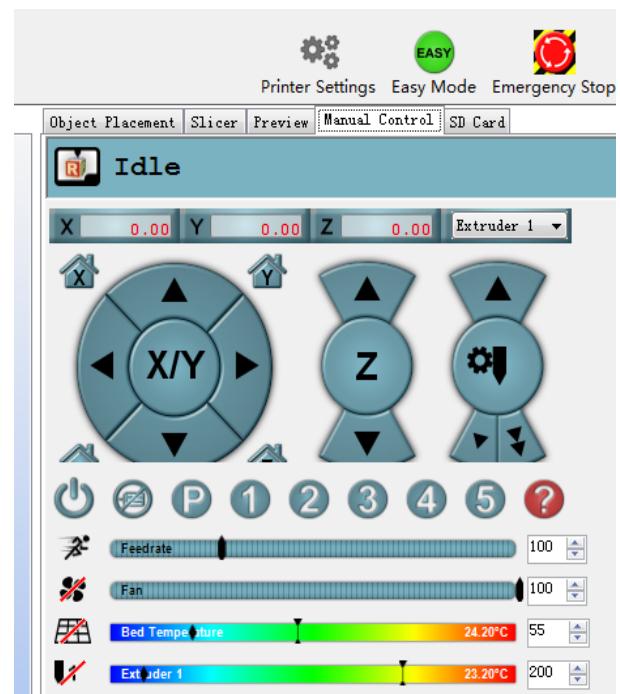
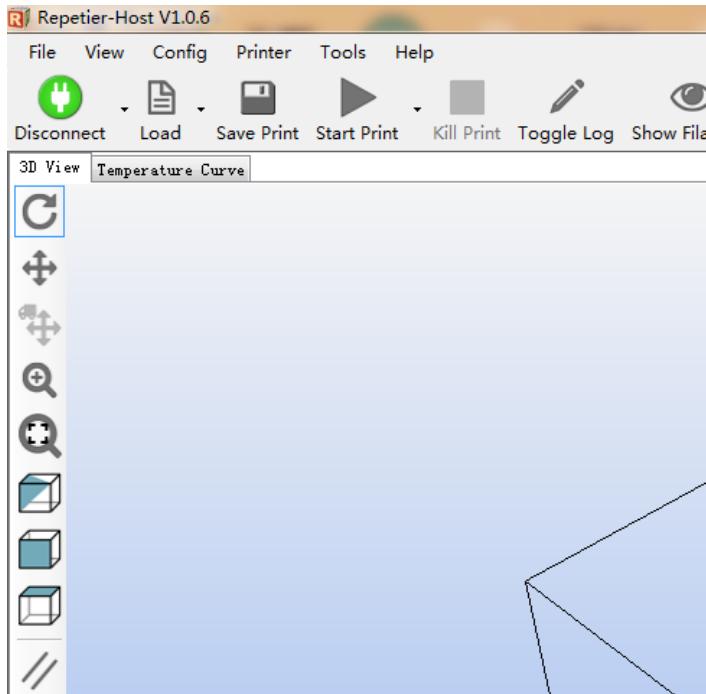
Step2: Set the print range



Step3: Start to connect



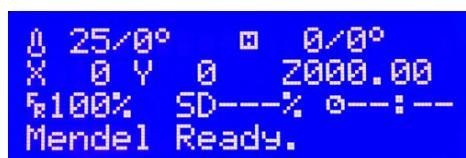
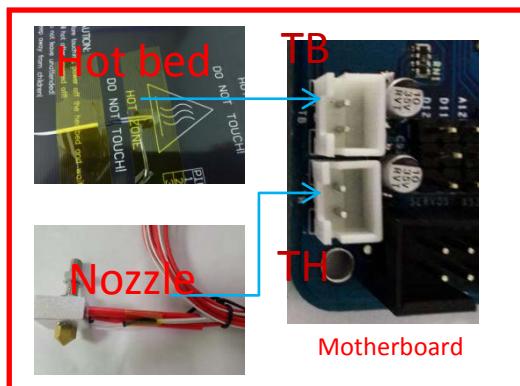
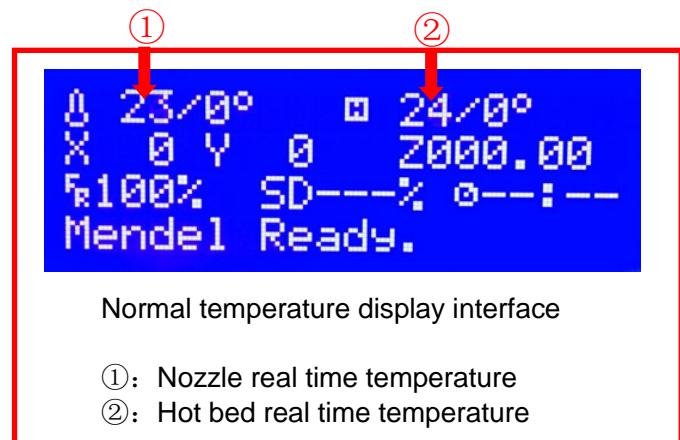
Step4: Connecting successfully



10. Frequently Asked Questions and Solutions

Please get the "Common problem" from the SD card for your reference (**SD-Card: \Common problem**)

10.1 "Err: MINTEMP" Alarm processing method



Reason: the hot bed thermistor is not connected to the main board "TB";

②(No temperature)display



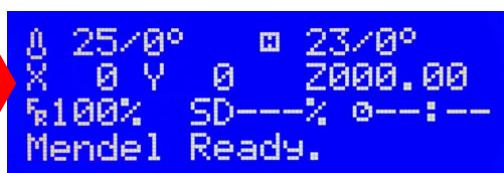
Reason: the nozzle thermistor is not connected to the main board "TH"

①(No temperature) display



Reason: the hot bed and the nozzle thermistor are not connected to the main board "TB", "TH";

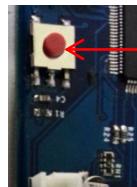
①②(No temperature display)



(Normal temperature display interface)

①②(Temperature display)

Press the reset button on the motherboard or after power-off restart, Appear "Ready Mendel", "Err: MINTEMP" Alarm release.



(Reset button)

10.2 Trouble: LCD screen is not bright



Solution method:

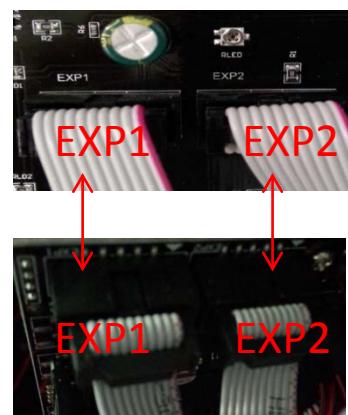
- (1). Confirm whether the power supply is normal ;
- (2) Confirm the LCD screen on the EXP1, EXP2 port is connected with the EXP1, EXP2 port on the motherboard, and no loose or poor contact



(LCD screen)

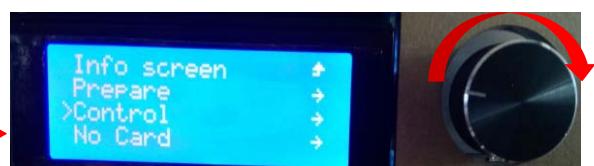
(Main board power indicator light,
power supply is normal)

(Motherboard)



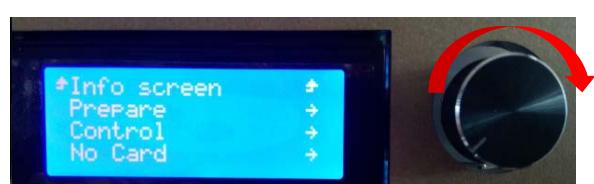
10.3 Trouble: Rotation button cannot be up and down the selection menu

(By rotating the button on the left side of the pointer
can be up and down the selection menu)



(Normal figure)

(No response to the left pointer by the rotation button)



(Abnormal figure)

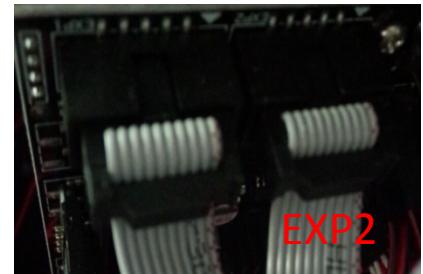
(Solution method) :

(Confirm that the EXP2 interface is properly connected, and that there is no contact with the bad phenomenon);

(LCD screen)



(Motherboard)



10.4 No extruded filament when printing



Picture 10.1 (Figure 1)



1.Check and confirm if the heating temperature is up as the setting (picture 10.1);

2.The heating temperature is OK,push down the filament and confirm the nozzle extrude the filament (Picture 10.2);

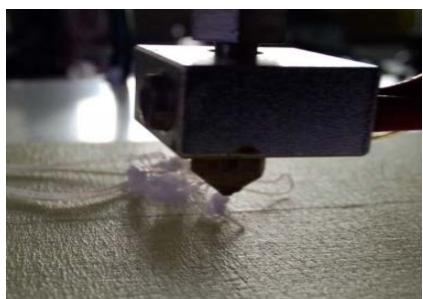
2.1 If the nozzle extrude the filamentby pushing down, please check and confirm if the filament feed wheel is loose or not (Picture 10.3)

2.2If nozzle didn't extrude the filament, the nozzle must be blocked and clean it



Picture 10.3 (Figure 3)

10.5 Problems on the distance between nozzle and hotbed



The distance between nozzle and hotbed is too high



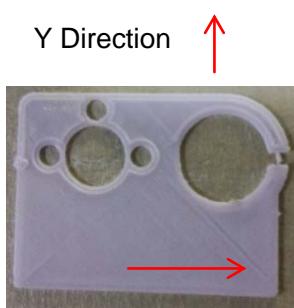
The distance between nozzle and hotbed is proper



The nozzle is too close to hotbed

Settle way: adjust the nozzle to the thickness of 1 A4 paper above the hotbed.

10.6 Model Dislocation when printing



Picture 10.4



Picture 10.5



Picture 10.6



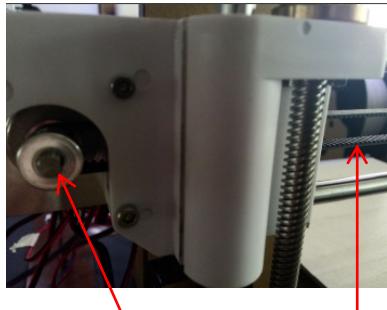
Picture 10.7

Dislocation for X direction

Dislocation for Y direction

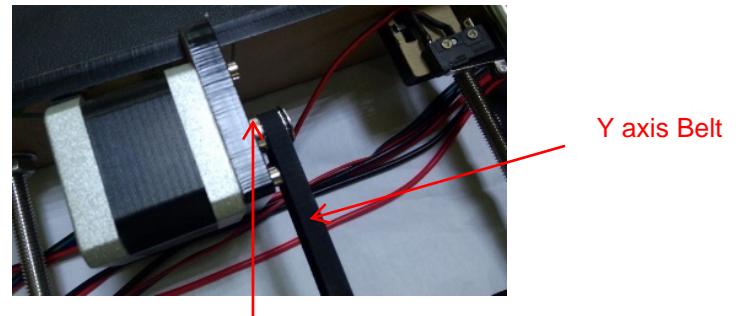
Dislocation for X &Y direction

1. Settle way of Dislocation for X direction: Check if Motor drum in-phase of X axis is loose or if the X axis belt is too tight or loose;
2. Settle way of Dislocation for Y direction: Check if Motor drum in-phase Y axis is loose or if the Y axis belt is too tight or loose.
3. Settle way of Dislocation for X &Y direction: Check if Motor drum in-phase X & Y axis is loose or if the X &Y axis belt is too tight or loose.



Motor drum in-phase of X axis

X axis Belt



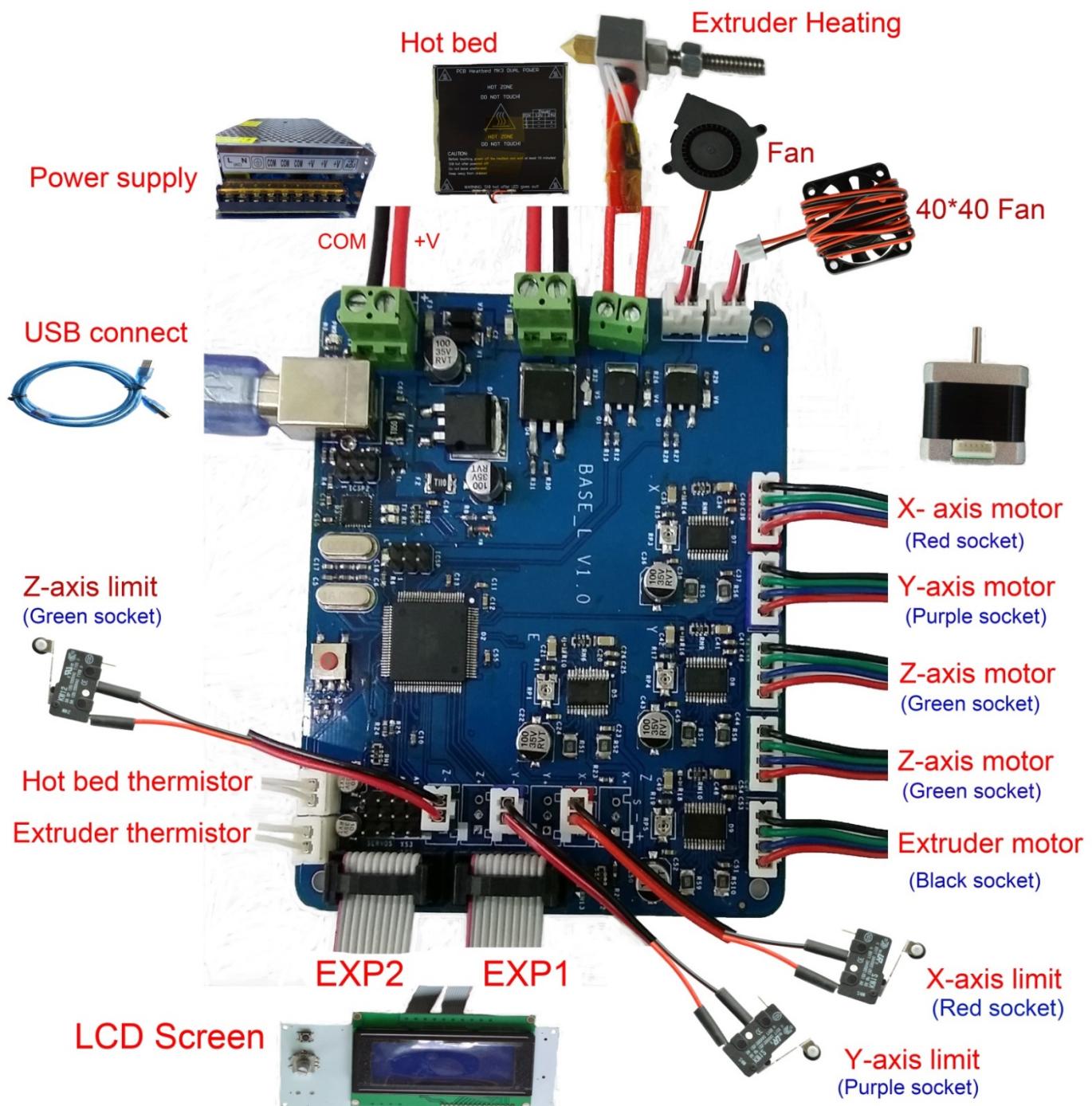
Motor drum in-phase of Y axis

Y axis Belt

PS: Please visit our site if you would like to get more information on 3D printer: <http://www.alunar.net>.

11. Wire Diagram of Main board

Wire diagram of mainboard



NOTE:

Do not insert or pull out the connection line between the motor and the main board when the power is turned on, so as not to damage the corresponding motor drive on the main board.